APPENDIX A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

IN THE MATTER OF:	)	
HELENA CHEMICAL COMPANY Superfund Site	)	Proceeding under Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. SS 9604 and 9622
Tampa, Florida	)	
Helena Chemical Company,	)	
Respondent	)	EPA Docket No.: 92-32-C

ADMINISTRATIVE ORDER BY CONSENT FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

I. JURISDICTION

This Administrative Order by Consent (Consent Order) is entered into by the United States Environmental Protection Agency (EPA) with Helena Chemical Company ("Respondent"), pursuant to the authority vested in the President of the United States by Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. §§ 9604, 9622(a) and 9622(d)(3). This authority was delegated by the President to the Administrator of the EPA by Exec. Order No. 12580, dated January 23, 1987, 52 Fed. Reg. 2923 (Jan. 29, 1987), and was further delegated to the Regional Administrator of Region IV EPA and redelegated to the Director, Waste Management Division.

Respondent agrees to undertake all actions required by the terms and conditions of this Consent Order for the conduct and implementation of the Remedial Investigation and Feasibility Study for surface conditions at the Site, including, but not limited to, soils, sediments, sludges and surface waters. ("Surface RI/FS"). Respondent consents to jurisdiction for purposes of entry and enforcement of this Consent Order by EPA. The Findings of Fact and Conclusions of Law are effective only for purposes of this Consent Order and are not binding in any other proceeding. Respondent reserves all rights it may have to object to or contest any allegations of violation of this Consent Order. Nothing in the Findings of Fact or Conclusions of Law or determinations made herein constitute an admission of fact or liability by Respondent; however, Respondent agrees not to challenge these findings or conclusions solely for purposes of enforcement of this Consent Order.

II. PARTIES BOUND

This Consent Order shall apply to and be binding upon EPA and the Respondent, its agents, successors, assigns, officers, directors, and principals. Respondent is responsible for carrying out all actions required of it by this Consent Order. The signatories to this Consent Order certify that they are authorized to execute and legally bind the parties they represent to this Consent Order. No change in the ownership or corporate status of the Respondent shall alter its responsibilities under this Consent Order.

The Respondent shall provide a copy of this Consent Order to any subsequent owners or successors before ownership rights are transferred. The Respondent shall provide a copy of this Consent Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Consent Order, within fourteen (14) days after the effective date of this Consent Order or the date of retaining their services, whichever is later. Respondent shall condition any such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, Respondent is responsible for compliance with this Consent Order and for ensuring that its subsidiaries, employees, contractors, consultants, subcontractors and agents comply with this Consent Order.

III. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objectives of EPA and Respondent are: (A) with respect to the Remedial Investigation of surface conditions at the Site (Surface RI), to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site into the environment; and (B) with respect to the Feasibility Study pertaining to surface conditions at the Site, (Surface FS), to develop and evaluate alternatives for remedial action to prevent, mitigate or otherwise respond to the migration or the release or threatened release of hazardous substances, pollutants, or contaminants from the Site; and (C) to recover response and oversight costs incurred by EPA with respect to this Consent Order.

The activities conducted pursuant to this Consent Order will be consistent with the National Contingency Plan (NCP), 40 C.F.R. Part 300, et seq., and will be subject to the express EPA approvals as set forth below.

IV. FINDINGS OF FACTS

The following constitutes an outline of the facts upon which this Consent Order is based:

A. The Helena Chemical Corporation site ("Site") is located at 2405 North 71st Street in Tampa, Hillsborough County, Florida.

B. Land use in the-immediate vicinity of the facility includes residential, institutional, commercial and industrial areas. The Site is located near the Stauffer Chemical Company site. The population within 4 miles of the Site is estimated at 112,873, with the nearest residence being 400 feet north of the facility.

C. Surface water runoff from the Site enters the Tampa Bypass Canal, approximately one-half mile away, which eventually connects to Hillsborough Bay. Groundwater at the Site occurs in the unconfined surficial aquifer, and the confined upper Floridan aquifer. Approximately 3,817 connections are served by public and private water supply wells obtaining water from the Floridan Aquifer within 4 miles of the Site. The nearest private well is located approximately 350 feet north of the Site.

D. The Site was originally developed in 1929 by Flagg Sulphur and Chemical Company to produce sulfur. Respondent Helena Chemical Company purchased the Site in 1967 and converted the facilities located thereon to formulate agricultural chemicals. Respondent formulated pesticides at the Site from 1967 to 1981. From 1981 to present, Respondent's operations at the Site have included formulation of liquid fertilizers, repackaging, warehousing and distribution of chemicals and products. Respondent continues to own the Site.

E. Facilities at the Site include, or have included in the past, processing and storage buildings, a warehouse, numerous holding tanks, in-ground tanks and above-ground tanks and assorted plumbing, drum storage areas, and a surface run-off retention pond.

F. Pesticides formulated and repackaged at the Site include, toxaphene, parathion, methyl parathion, mevinphos, naled, malathion, EPN, dimethoate, dioxathion, dimpylate, endrin and chlordane. These pesticides also include chlorobenzilate (an acaricide), 1,2-dibromo-3-chloropropane (a nematicide), insecticidal petroleum oil, and herbicides (dimethylamine salt of 2,4-D and dinoseb). Other pesticides stored at the Site include atrazine, paraquat, gamma-BHC, glyphosate, tebuthiuron and oryzalin.

G. Chemicals used in the formulation of products at the Site included, but are not necessarily limited to, xylene, zinc sulfate, ferrous sulfate, magnesium sulfate, manganese sulfate, sulfuric acid, phosphoric acid, sodium hydroxide, and nitric acid.

H. Surface soil samples collected on site contained elevated concentrations of constituents including, but not necessarily limited to, 4 -,4'-DDT, 4,41-DDD, arsenic, toxaphene, dieldrin, manganese, and zinc. Subsurface soil samples contained elevated concentrations of constituents including, but not necessarily limited to, 4,4'-DDT, manganese, zinc, and arsenic. Sediment samples collected from the retention pond contain elevated concentrations of constituents, including, but not necessarily limited to, 4,4'-DDD, toxaphene, arsenic, manganese and zinc.

I. Groundwater samples collected at the Site contained elevated concentrations of constituents including, but not necessarily limited to, xylenes, alpha-BHC, beta-BHC, dieldrin, manganese, zinc and arsenic.

J. Pathways of concern at the Site include the groundwater pathway, because of possible contamination of well water. The surface water pathway is of concern because the nearby bodies of surface water support commercial and recreational fishing, as well as other recreational activities. Air and soil exposure pathways are of concern because of the residents living nearby.

K. The Site was proposed for inclusion on the National Priorities List ("NPL"), as defined in Section 105 of CERCLA, as amended, 42 U.S.C. S 9605, in February, 1992.

V. CONCLUSIONS OF LAW

A. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. S 9601(9).

B. The Respondent is a person as defined in Section 101(21) of CERCLA, 42 U.S.C. S 9601(21).

C. The Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. S 9607(a).

D. Contaminants found at the Site as described in Section IV above are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. S 9601(14), or constitute a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. 9604(a)(1).

E. The hazardous substances described have been released into the environment and its potential migration pathways constitute both an actual release and threatened release within the meaning of Section 101(22) of CERCLA, 42 U.S.C. S 9601(22).

VI. DETERMINATIONS

Based on the Findings of Fact and Conclusions of Law set out above, EPA has determined that:

A. The actual and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.

B. The actions required by this Consent Order are necessary to protect the public health and/or welfare and/or the environment.

C. In accordance with Section 104(a)(1) of CERCLA, 42 U.S.C. S 9604(a)(1), EPA has determined that the work to be performed pursuant to this Consent Order, if performed according to the terms of this Order, will be done properly and promptly by the Respondent. EPA has also determined that the Respondent is qualified to conduct such work.

VII. WORK TO BE PERFORMED

All aspects of the Work to be performed by Respondent pursuant to this Consent Order shall be under the direction and supervision of a qualified contractor who shall be a qualified professional engineer or geologist with expertise in hazardous site cleanup, the selection of which shall be subject to approval by EPA. Within fifteen (15) days after the effective date of this Consent Order, Respondent shall submit to EPA in writing the name, title, and qualifications of any supervising contractor proposed to be used in carrying out the Surface RI/FS to be performed pursuant to this Consent Order. EPA shall notify the Respondent of its approval or disapproval in writing, within twenty (20) calendar days of its receipt of this submission by the Respondent.

If EPA disapproves of the selection of any contractor, Respondent shall submit a list of alternate contractors to EPA within fifteen (15) days of receipt of EPA's disapproval of the contractor previously selected. EPA shall, within twenty (20) calendar days of receipt of the list, provide written notice of the names of the contractors that it approves. The Respondent may at its election select any one from that list. Respondent shall notify EPA of the name of the contractor selected within fifteen (15) calendar days of EPA's notice of the approved contractors.

If, at any time thereafter, Respondent proposes to change any contractor, Respondent shall give written notice to EPA and shall obtain approval from EPA before the new contractor performs any work under this Consent Order.

Based on the foregoing, it is hereby AGREED TO AND ORDERED that the following work will be performed:

A. Within forty-five (45) calendar days of the effective date of this Consent Order, Respondent shall submit to EPA a plan for a complete Remedial Investigation and Feasibility Study for surface conditions at the Site (Surface RI/FS Work Plan). The RI/FS Work Plan shall be developed and submitted in conjunction with a Sampling and Analysis Plan and a Health and Safety Plan, although each plan may be delivered under separate cover. These plans shall be developed in accordance with the National Contingency Plan and the attached Scope of Work (SOW) (Attachment 1) which is hereby made a part of this Consent Order as if fully set forth herein. The Surface RI/FS Work Plan shall include a comprehensive description of the work to be performed, the media to be investigated (i.e., air, surface water, surface and subsurface soils and sediments, etc.), the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity required by this Consent Order and including the submission of each deliverable listed in the RI/FS Scope of Work shall also be included. Such schedule shall reflect submittal of the draft Surface Remedial Investigation Report (draft Surface RI Report) within 180 calendar days of the receipt by Respondent of notification of the approval of the Surface RI/FS Work Plan and shall reflect submittal of the draft Surface Feasibility Study Report (draft Surface FS Report) within 120 calendar days of the receipt by Respondent of the Baseline Risk Assessment from EPA. Other deliverables listed in Attachment B to the SOW shall also be incorporated into the schedule to be submitted as part of the Surface RI/FS Work Plan.

The Sampling and Analysis Plan (SAP) shall include procedures to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the Data Quality Objectives (DQOs) established. The SAP provides a mechanism for planning field activities and consists of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sample objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs.

A Health and Safety Plan shall be prepared in conformance with the Respondent's health and safety program and OSHA regulations and protocols.

B. EPA will perform the Baseline Risk Assessment. Respondent shall support EPA in the effort by providing various information to EPA as outlined above. The major components of the Baseline Risk Assessment include contaminant identification, exposure assessment, toxicity assessment, and human health and ecological risk characterization.

EPA will provide, after review of the Respondent's site characterization summary, sufficient information concerning the risks such that Respondent can begin drafting the Surface Feasibility Study (FS) Report.

EPA will prepare a Baseline Risk Assessment Report based on the data collected by Respondent during the Site Characterization. EPA will release this Report to the public at the same time it releases the final Surface RI Report. Both reports will be put into the administrative record for the Site.

EPA will respond to all significant comments on the memoranda or the Baseline Risk Assessment that are resubmitted during the formal comment period in the Responsiveness Summary of the Record of Decision.

C. Respondent will implement the Surface RI/FS Work Plan approved by EPA. The EPA approved Surface RI/FS Work Plan and any EPA approved amendments thereto will be attached to and incorporated in this Consent Order as Attachment 2. The Surface RI/FS will be conducted in accordance with the schedule contained in the RI/FS Work Plan as approved by EPA.

D. Within fifteen (15) calendar days of the approval of the Surface RI/FS Work Plan by EPA, Respondent will commence work on Task 1 of the Surface RI/FS Work Plan.

E. Respondent shall submit to EPA written monthly progress reports which: (1) describe the actions which have been taken toward achieving compliance with this Consent order during the previous month; (2) include all results of sampling and tests and all other data received by Respondent during the course of the work; (3) include all plans and procedures completed under the Work Plan during the previous month; (4) describe all actions, data, and plans which are scheduled for the next month, and provide other information relating to the progress of the work as deemed necessary by EPA; and (5) include information regarding percentage of completion, unresolved delays, encountered or anticipated, that may affect the future schedule for implementation of the Scope of Work and/or RI/FS Work Plans, and a description of efforts made to mitigate those delays or anticipated delays. These progress reports are to be submitted to EPA by the fifth day of every month following the effective date of this Consent Order.

F. Deliverables, including reports, plans or other correspondence to be submitted pursuant to this Consent Order, shall be sent by regular certified mail, express mail or overnight delivery to the following addresses or to such other addresses as the EPA hereafter may designate in writing.

Shawn Luetchens
Remedial Project Manager
EPA - Region IV
Waste Management Division
345 Courtland Street, N.E.
Atlanta, Georgia 30365

The number of copies to be submitted to EPA for each deliverable is identified in the RI/FS Scope of Work.

For informational purposes documents (two copies) shall be sent to:

Florida Department of Environmental Regulation
Division of Waste Cleanup
Bureau of Waste Cleanup
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Documents to be submitted to the Respondent's Project Coordinator should be sent to:

(name to be provided later)

An additional copy of all documents shall be sent to:

Edward B. Brister
Manager, Regulatory Compliance
& Engineering
Helena Chemical Company
6075 Poplar Avenue
Suite 500
Memphis, Tennessee 38119

G. EPA may determine that other tasks, including remedial investigatory work and/or engineering evaluation, are necessary as part of an RI/FS for surface conditions at the Site in addition to EPA-approved tasks and deliverables, including reports, which have been completed pursuant to this Consent Order. The Respondent shall implement any additional tasks which EPA determines are necessary as part of the Surface RI/FS and which are in addition to the tasks detailed in the Surface RI/FS Work Plan. The additional work shall be completed in accordance with the standards, specifications, and schedule determined or

approved by EPA. If additional field work is required by EPA after the initial field work is completed, the schedule contained in the Surface RI/FS Work Plan shall be adjusted accordingly.

VIII. SUBMISSIONS REQUIRING AGENCY APPROVAL

A. EPA reserves the right to comment on, modify and direct changes for all deliverables. Upon receipt of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Order, EPA shall either: (1) approve the submission; or (2) disapprove the submission, notifying Respondent of deficiencies. If such submission is disapproved, EPA shall either: (1) notify the Respondent that EPA will modify the submission to cure the deficiencies; or (2) direct the Respondent to modify the submission to cure the deficiencies.

B. Upon receipt of a notice of disapproval and notification directing modification of the submission, Respondent shall, within thirty (30) days, cure the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the notice of disapproval, Respondent shall proceed to take any action required by any nondeficient portion of the submission.

C. In the event of approval or modification of the submittal by EPA, Respondent shall proceed to take any action required by the plan, report, or other item, as approved or modified.

D. If, upon resubmission, the plan, report, or item is not approved, EPA may deem the Respondent to be in violation of this Consent Order and stipulated penalties may begin to accrue pursuant to Section XVI of this Consent Order. Respondent retains the right to invoke the dispute resolution procedures of Section XIV (Dispute Resolution) of this Consent Order to dispute any finding of violation or assessment of stipulated penalties. EPA retains the right to seek stipulated or statutory penalties, to require the amendment of the document, to perform additional studies, to conduct a complete Surface RI/FS pursuant to its authority under CERCLA, and to take any other action, including, but not limited to, enforcement action to recover its costs pursuant to its authority under CERCLA.

E. Neither failure of EPA to expressly approve or disapprove of Respondent's deliverables within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Respondent is responsible for preparing and submitting deliverables acceptable to EPA.

F. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct and completion of the Surface RI/FS. In addition to the

discussion of the technical aspects of the Surface RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

G. The provisions of this Consent Order shall govern all proceedings regarding the Surface RI/FS work conducted pursuant to this Consent Order. In the event of any inconsistency between this Consent Order and any required deliverable submitted by Respondent, the inconsistency will be resolved in favor of this Consent Order.

IX. DESIGNATED PROJECT COORDINATORS

A. On or before the effective date of this Consent Order, EPA and Respondent will each designate a Project Coordinator and an Alternate Project Coordinator. The "Project Coordinator" for EPA will be the Remedial Project Manager (RPM) or the On-Scene Coordinator (OSC) responsible for this Site. Each Project Coordinator will be responsible for overseeing the implementation of this Consent Order. The EPA Project Coordinator will be EPA's designated representative at the Site. To the maximum extent possible, communications between Respondent and EPA, including all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Order, will be directed through the Project Coordinators.

B. EPA and Respondent each have the right to change their respective Project Coordinator. Such a change will be accomplished by notifying the other party in writing at least five (5) calendar days prior to the change.

C. The EPA designated Project Coordinator will have the authority vested in an RPM or OSC by the National Contingency Plan, 40 C.F.R. Part 300, as amended. This includes the authority to halt, conduct, or direct any work required by this Consent Order, or any response actions or portions thereof when he or she determines that conditions may present an immediate risk to public health or welfare or the environment.

D. The absence of the EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of work.

E. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the Surface RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. 9604(a). The oversight assistant may observe work and make inquiries in the absence of EPA, but is not authorized to modify the work plan.

X. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

A. Respondent shall use quality assurance, quality control, and chain of custody procedures in accordance with EPA's "Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans" (QAMS-005/80) and the "EPA Region IV Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual (U.S. EPA Region IV, Environmental Services Division, February 1, 1981), and subsequent amendments to such guidelines. Prior to the commencement of any monitoring project under this Consent Order, Respondent shall submit for review, modification and/or approval by EPA, a Quality Assurance Project Plan ("QAPP") that is consistent with applicable guidelines. Sampling data generated consistent with the QAPP(S) shall be admissible as evidence, without objection, in any proceeding under Section XIV of this Consent Order. Respondent shall assure that EPA personnel or authorized representatives are allowed access to any laboratory utilized by Respondent in implementing this Consent Order.

B. Respondent shall make available to EPA the results of all sampling and/or tests or other data generated by Respondent with respect to the implementation of this Consent Order and shall submit these results in monthly progress reports as described in Section VII.E. of this Consent Order.

C. At the request of EPA, Respondent shall allow split or duplicate samples to be taken by EPA, and/or their authorized representative, of any samples collected by Respondent pursuant to the implementation of this Consent Order. Respondent shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. In addition, EPA shall have the right to collect any additional samples that EPA deems necessary. EPA shall allow split or duplicate samples to be taken by the Respondent of any samples collected by EPA or its contractors during the performance of work associated with this Consent Order. EPA shall attempt to notify Respondent not less than seventy-two (72) hours in advance of any sample collection activity. Respondent shall provide its own containers for the sampling.

D. Respondent shall ensure that the laboratory utilized by Respondent for analyses participates in a EPA quality assurance/quality control program equivalent to that which is followed by EPA and which is consistent with EPA document QAMS-005/80. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory.

E. Notwithstanding any provision of this Consent Order, the EPA hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA, and any other applicable statute or regulation.

XI. ACCESS

A. From the date of execution of this Consent Order until EPA provides written notice of satisfaction of the terms of the Order, the EPA and its authorized representatives and agents shall have access at all times to the Site and any property to which access is required for the implementation of this Consent Order, to the extent access to the property is controlled by or available to Respondent, for the purposes of conducting any activity authorized by or related to this Consent Order, including, but not limited to:

1. Monitoring the Surface RI/FS work or any other activities taking place on the property;

2. Verifying any data or information submitted to the United States;

3. Conducting investigations relating to contamination at or near the Site;

4. Obtaining samples;

5. Evaluating the need for or planning and implementing additional remedial or response actions at or near the Site; and

6. Inspecting and copying nonprivileged records, operating logs, contracts, or other documents required to assess Respondent's compliance with this Consent Order.

B. To the extent that the Site or any other area where work is to be performed under this Consent Order is owned or controlled by persons other than Respondent, Respondent shall use best efforts to secure from such persons access for Respondent, as well as for EPA and authorized representatives or agents of EPA, as necessary to effectuate this Consent Order. Copies of such access agreements will be provided to EPA prior to Respondent's initiation of field activities. If access is not obtained within thirty (30) days of the effective date of this Consent Order, Respondent shall promptly notify the EPA. The United States may thereafter assist Respondent in obtaining access. Respondent shall, in accordance with Section XVII herein, reimburse the United States for all costs incurred by it in obtaining access, including but not limited to, attorneys' fees and the amount of just compensation and costs incurred by the United States in obtaining access.

C. Notwithstanding any provision of this Consent Order, the EPA retains all of its access authorities and rights under CERCLA, RCRA and any other applicable statute or regulations.

XII. CONFIDENTIALITY OF SUBMISSIONS

A. Respondent may assert a confidentiality claim, if appropriate, covering part or all of the information requested by this Consent Order pursuant to 40 C.F.R. S 2.203(b). Such an assertion will be adequately substantiated when the assertion is made. Analytical data will not be claimed as confidential by Respondent. Information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to Respondent.

B. Respondent waives any objection to the admissibility into evidence (without waiving any objection as to weight) of the results of any analyses of sampling conducted by or for them at the Site or of other data gathered pursuant to this Consent Order that has been verified by the quality assurance/quality control procedures established pursuant to Section X.

XIII. RECORD PRESERVATION

EPA and Respondent agree that each will preserve, during the pendency of this Consent Order and for a minimum of six (6) years after its termination, one copy of all records and documents in their possession or in the possession of their divisions, employees, agents, accountants, contractors, or attorneys which relate in any way to the Site, despite any document retention policy to the contrary. After this six year period, Respondent will notify EPA within ninety (90) calendar days prior to the destruction of any such records and documents. Upon request by EPA, Respondent will make available to EPA such records and documents or copies of any such records or documents. Additionally, if EPA requests that records or documents be preserved for a longer period of time, Respondent will comply with that request.

XIV. DISPUTE RESOLUTION

Any disputes arising under this Consent Order shall be resolved as follows: If the Respondent objects to any EPA notice of disapproval or decision made pursuant to this Consent Order, the Respondent shall notify EPA's Project Coordinator in writing of its objections within 14 calendar days after receipt of the decision. Respondent's written objections shall define the dispute, state the basis of Respondent's objections, and be sent certified mail, return receipt requested. EPA and the Respondent then have an additional fourteen (14) calendar days to reach

agreement. If agreement cannot be reached within fourteen (14) calendar day period, the EPA Waste Management Division Director shall provide a written statement of the decision and the reasons supporting that decision to Respondent. The Division Director's determination is EPA's final decision. If Respondent does not agree to perform or does not actually perform the task in dispute as determined by EPA's Division Director, EPA reserves the right to conduct the work itself, to seek reimbursement from the Respondent, and/or to seek other appropriate relief.

Respondent is not relieved of its obligations to perform and conduct any work required by this Consent order while a matter is pending in dispute resolution. However, no additional stipulated penalties shall accrue for a matter in dispute during the period after the fourteen (14) day period of informal negotiations expires but prior to the issuance of a decision by the Waste Management Division Director.

XV. FORCE MAJEURE

A. "Force Majeure" is defined for the purposes of the Consent Order as an event arising from causes entirely beyond the control of Respondent and of any entity controlled by Respondent including its contractors and subcontractors, which could not have been overcome by due diligence which delays or prevents the performance of any obligation under this Consent Order. Examples of events which may constitute force majeure events include extraordinary weather events, natural disasters, and national emergencies. Examples of events that are not force majeure events include, but are not limited to, normal inclement weather, increased costs or expenses of the Work to be performed under this Consent Order, the financial difficulty of Respondent to perform such tasks, the failure of Respondent to satisfy its obligation under this Consent Order, acts or omissions not otherwise force majeure attributable to Respondent's contractors or representatives, and the failure of Respondent or Respondent's contractors or representatives to make complete and timely application for any required approval or permit.

B. When circumstances occur which may delay or prevent the completion of any phase of the Work Plan or access to the Site or to any property on which part of the Work Plan is to be performed, whether or not caused by a force majeure event, Respondent shall notify the EPA Project Coordinator orally of the circumstances within forty-eight (48) hours of when Respondent first knew or should have known that the event might cause delay. If the EPA Project Coordinator is unavailable, Respondent shall notify the designated alternate or the Director of the Waste Management Division, EPA Region IV. Within seven (7) calendar days after Respondent first became aware of such circumstances, Respondent shall supply to EPA in writing: (1) the reasons for the delay; (2) the anticipated duration of the delay; (3) all

actions taken or to be taken to prevent or minimize the delay; (4) a schedule for implementation of any measures to be taken to mitigate the effect of the delay; and (5) a statement as to whether, in the opinion of the Respondent, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Respondent shall exercise best efforts to avoid or minimize any delay and any effects of a delay. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of force majeure.

C. If EPA agrees that a delay is or was caused by a force majeure event, the time for performance of the obligations under this Consent Order that are directly affected by the force majeure event shall be extended by agreement of the parties, pursuant to Section XXIII, for a period of time not to exceed the actual duration of the delay caused by the force majeure event. An extension of the time for performance of the obligation directly affected by the force majeure event shall not necessarily justify an extension of time for performance of any subsequent obligation.

D. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, or does not agree with Respondent on the length of the extension, the issue shall be subject to the dispute resolution procedures set forth in Section XIV of the Consent Order. In any such proceedings, to qualify for a force majeure defense, Respondent shall have the burden of proof that the delay or anticipated delay was or will be caused by a force majeure event, that the duration of the delay was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of paragraph B of this Section. Should Respondent carry this burden, the delay at issue shall be deemed not to be a violation by Respondent of the affected obligation of the Consent Order.

XVI. STIPULATED PENALTIES

Unless excused under the provisions of Sections XIV or XV, the Respondent shall pay into the Hazardous Substance Superfund administered by EPA, the sums set forth below as stipulated penalties.

Stipulated penalties shall accrue as follows:

A. For each day during which Respondent fails to perform, in accordance with the schedules contained in this Consent Order and in the various plans and reports required under this Consent Order incorporated by reference herein, any of the following activities:

1. for failure to timely submit the Surface RI/FS Work Plan, Sampling and Analysis Plan, draft Surface RI Report and draft Surface FS Report required under this Consent Order;

2. for failure to timely submit any modifications requested by EPA or its representatives to the Surface RI/FS Work Plan, Sampling and Analysis Plan, draft Surface RI Report and draft Surface FS Report as required under this Consent Order; and

3. for failure to timely submit payment of oversight costs as provided in Section XVII.

Respondent shall be liable to EPA for stipulated penalties in the following amounts:

Period of Failure to Comply	Penalty Per Violation Per Day
1st through 14th day	$1,000
15th through 28th day	$2,000
29th through 44th day	$3,000
45th day and beyond	$5,000

B. If Respondent fails to submit a monthly progress report by its due date, Respondent shall be liable to EPA for stipulated penalties in the amount of $500 per violation for each day during which Respondent fails to submit and, if necessary, modify monthly reports.

C. Respondent shall be liable to EPA for stipulated penalties in the amount of $1000 per violation for each day during which Respondent fails to comply with all other requirements of this Consent Order including, but not limited to, any implementation schedule, payment requirement, notification requirement or completion deadline.

All stipulated penalties begin to accrue on the day the violation occurs or on the day following Respondent's failure to comply with any schedule or deadline or the terms, conditions, or requirements contained in this Consent Order and/or Surface RI/FS Work Plan. Stipulated penalties shall continue to accrue until Respondent's violation ends or until Respondent complies with the particular schedule or deadline.

Payment of stipulated penalties shall be due and owing within thirty (30) days from the receipt of a written notice from EPA notifying Respondent that penalties have been assessed. Interest shall accrue on any unpaid amounts, beginning at the end of the thirty (30) day period, at the rate established by the Department of Treasury under 31 U.S.C. § 3717. Respondent shall pay a handling charge of one percent to be assessed at the end of each 31 day period, and a six percent per annum penalty charge, to be assessed if the penalty is not paid in full within 90 days after

it is due. The check and transmitted letter shall identify the Name of the Site, the Site identification number and the title of this Order. A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

Payment shall be made to:

U.S. Environmental Protection Agency
Region IV
Superfund Accounting
P.O. Box 100142
Atlanta, Georgia 30364
ATTENTION: (Collection Officer for Superfund)

Respondent may dispute EPA's right to the stated amount of penalties by invoking the Dispute Resolution procedures under Section XIV of this Order. Penalties shall accrue but need not be paid during the dispute resolution period. If Respondent does not prevail upon resolution, all penalties shall be due to EPA within 30 days of resolution of the dispute. If Respondent prevails upon resolution, no penalties shall be paid.

Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Order.

The stipulated penalties set forth in this Section do not preclude EPA from electing to pursue any other remedies or sanctions which may be available to EPA by reason of the Respondent's failure to comply with any of the requirements of this Consent Order. Such remedies and sanctions may include a suit for statutory penalties up to the amount authorized by law, a federally-funded response action, and a suit for reimbursement of costs incurred by the United States.

XVII. REIMBURSEMENT OF OVERSIGHT AND RESPONSE COSTS

A. Past Costs

Subject to Paragraph D of this Section, and according to the schedule contained in this Paragraph A of this Section, Respondent shall pay to EPA $149,312.84 in reimbursement of Regional personnel costs incurred by EPA or it authorized representatives at the Site prior to April 18, 1992, indirect costs based on those personnel costs, travel costs incurred prior to April 30, 1992, and contract costs, including contract laboratory costs, incurred prior to April 30, 1992.

Within fifteen (15) days of the effective date of this Consent Order, Respondent may request to review EPA's standard documentation package prepared in support of EPA's Superfund Cost Organization and Recovery System (SCORE$) report of EPA's past costs at the Site.

Respondent shall pay the past costs defined in Paragraph A of this Section in 4 equal installments. The first installment shall be due thirty (30) days after the effective date of this Consent Order, or, in the event the Respondent requests the cost documentation as provided in Paragraph A of this Section, within thirty (30) days of receipt by Respondent of that cost documentation. The second, third and fourth installments shall be due respectively 90, 180 and 270 days after the due date of the first installment. Interest shall accrue on the second, third and fourth installments, beginning on the due date for the first installment, at the rate established pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

Thirty (30) days prior to the due date of each of the second, third and fourth installments, Respondent shall in writing request that the EPA Project Coordinator inform the Respondent of the amount of interest accrued for that installment. When paying the installment, Respondent shall also pay the interest accrued for that installment.

B. Future Costs

In accordance with Section 104(a)(1) of CERCLA, as amended, 42 U.S.C. S 9604(a)(1), Respondent agrees to reimburse the Hazardous Substance Superfund for all response and oversight costs incurred by EPA or its authorized representatives in oversight of Respondent's performance of work under the Consent Order.

At the end of each fiscal year, EPA will submit to Respondent an accounting of all response and oversight costs incurred by the U.S. Government with respect to this Consent Order. Oversight costs shall include all direct and indirect costs of EPA's oversight arrangement for the Surface RI/FS, including, but not limited to, time and travel costs of EPA personnel and associated indirect costs, contractor costs, compliance monitoring, including the collection and analysis of split samples, inspection of Surface RI/FS activities, site visits, interpretation of Consent Order provisions, discussions regarding disputes that may arise as a result of this Consent Order, review and approval or disapproval of reports, the costs of redoing any of Respondent's tasks, and any assessed interest.

Respondent shall, within thirty (30) calendar days of receipt of each accounting, pay to EPA the amount identified in each accounting.

EPA's certified SCORE$ report and any other necessary documents, shall serve as the basis for payment demands. Within fifteen (15) days of receipt of each accounting, Respondent may request to review EPA's standard cost documentation package prepared in support of the SCORE$ report for EPA's costs identified in the accounting. In the event that Respondent requests such

documentation, then payment of the costs to EPA shall be made within thirty (30) days of receipt by Respondent of such documentation.

Failure to submit an accounting in one fiscal year does not prevent EPA from submitting an accounting for that year in a subsequent fiscal year.

C. Payment

Payments under this Section should be made by cashier's or certified check made payable to the Hazardous Substance Superfund. Checks should specifically reference the identity of the Site and should be sent to:

U. S. Environmental Protection Agency
Region IV
Superfund Accounting
P. O. Box 100142
Atlanta, Georgia 30384
ATTENTION: Collection Officer for Superfund

A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

Interest shall begin to accrue on any unpaid balance thirty (30) days after its due date under this Section.

D. Cost Disputes

Respondent agrees to limit any disputes concerning past costs under Paragraph A of this Section or oversight and response costs under Paragraph B of this Section to accounting errors, the incurrence of costs inconsistent with the National Contingency Plan (NCP), and the inclusion of costs outside the scope of this Consent Order. Respondent shall notify EPA's project coordinator of any disputes concerning EPA's past costs within fourteen (14) days of the effective date of this Consent Order, or receipt by Respondent of EPA's cost documentation package, whichever is later. Any disputes concerning EPA's costs shall identify contested costs and the basis of its objection. All undisputed costs shall be remitted by Respondent in accordance with the schedule set out above. Respondent shall pay any disputed costs, which as a result of the dispute resolution process are deemed owed by the Respondent under Section XIV of this Consent Order, to EPA within seven (7) days of receipt of completion of the Dispute Resolution process, as well as interest on that amount from the date payment of costs was due under Paragraphs A or B of this Section. Respondent bears the burden of establishing an EPA accounting error, that the incurrence of costs are inconsistent with the NCP, and that costs have been included outside the scope of this Consent Order.

EPA reserves the right to bring an action against the Respondent pursuant to Section 107 of CERCLA to enforce the response and oversight cost reimbursement requirements of this Consent Order and to collect stipulated penalties assessed pursuant to section XVI of this Consent Order.

XVIII. RESERVATION OF RIGHTS

Notwithstanding compliance with the terms of this Consent Order, the Respondent is not released from liability, if any, for any actions beyond the terms of this Consent Order taken by EPA regarding this Site. EPA reserves the right to take any enforcement action pursuant to CERCLA or any other available legal authority, including the right to seek injunctive relief, monetary penalties, and punitive damages for any violation of law or this Consent Order.

Except as otherwise provided herein, EPA and Respondent expressly reserve all rights and defenses that they may have, including EPA's right both to disapprove of work performed by Respondent and to require that Respondent perform tasks in addition to those detailed in the Surface RI/FS Work Plan, as provided in this Consent Order. In the event that Respondent declines to perform any additional or modified tasks, EPA will have the right to undertake any Surface RI/FS work. In addition, EPA reserves the right to undertake removal actions and/or remedial actions at any time. In either event, EPA reserves the right to seek reimbursement from Respondent thereafter for such costs which are incurred by the United States after April 30, 1992, or, in the case of payroll and indirect costs, after April 18, 1992, and any costs incurred by EPA prior to that date but not yet reimbursed by Respondent. Respondent reserves all defenses and all rights to contest or defend against such claims or actions.

Respondent reserves all rights that it has or may have to assert claims against persons or entities, except for the United States, for matters arising out of the Site or its operation and ownership, including, but not limited to, claims for breach of contract, indemnity, contribution, nuisance and claims under federal, state and local laws.

Following satisfaction of the requirements of this Consent Order, Respondent shall have resolved its liability to EPA for the performance of the Surface RI/FS that is the subject of this Order. The Respondent is not released from liability, if any, for any actions taken beyond the terms of this Order regarding removals, other operable units, remedial design/remedial action (RD/RA), or activities arising pursuant to Section 121(c) of CERCLA.

XIX. OTHER CLAIMS

Nothing in this Consent Order constitutes a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.

EPA reserves the right to bring an action against the Respondent pursuant to Section 107 of CERCLA for recovery of all response and oversight costs incurred by the United States related to this Consent Order and not reimbursed by Respondent, as well as any other past and future costs incurred by the United States in connection with response activities conducted pursuant to CERCLA at this site.

This Consent Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. S 9611(a)(2).

In entering into this Consent Order, Respondent waives any right to seek reimbursement from the United States or the Hazardous Substances Superfund, under Section 106(b)(2) of CERCLA, 42 U.S.C. S 9606(b)(2), for any past costs associated with this Site, or any costs incurred in complying with this Order. Respondent shall bear its own costs and attorney fees.

XX. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to this Consent Order will be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations unless an exemption from such requirements is specifically provided in this Consent Order, or made a part of this Consent Order by being incorporated herein at some later date.

XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent agrees to indemnify and save and hold harmless the United States, its agencies, departments, officials, agents, employees, contractors, or representative, from any and all claims or causes of action arising from or on account of acts or omissions of Respondent, its officers, employees, receivers, trustees, agents, or assigns, in carrying out the activities pursuant to this Consent Order. The United States Government or any agency or authorized representative thereof shall not be held to be a party to any contract involving Respondent at or relating to the Site.

XXII. PUBLIC COMMENT

Upon submittal to EPA of the Surface Feasibility Study Final Report, EPA will make both the Surface Remedial Investigation Final Report and the Surface Feasibility Study Final Report to the public for review and comment for, at a minimum, a thirty (30) day period, pursuant to EPA's Community Relations Plan and the NCP. EPA shall attempt to provide Respondent with notice of public meetings to be held by or sponsored by EPA to explain activities at the Site, and may request that Respondent participate in such meetings. Following the public review and comment period, EPA will notify Respondent of the remedial action alternative selected for the Site.

XXIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

In consideration of the communications between Respondent and EPA prior to the issuance of this Consent Order concerning its terms, Respondent agrees that there is no need for a settlement conference prior to the effective date of this Consent Order. Therefore, the effective date of this Consent Order will be the date on which it is signed by EPA. This Consent Order may be amended by mutual agreement of EPA and Respondent. Such amendments will be in writing and will have, as the effective date, that date on which such amendments are signed by EPA. EPA Project Coordinators do not have the authority to sign amendments to the Consent Order.

Any reports, plans, specifications, schedules, and attachments required by this Consent Order are, upon approval by EPA, incorporated into this Consent Order. Any noncompliance with such EPA approved reports, plans, specifications, schedules, and attachments will be considered a failure to achieve the requirements of this Consent Order and will subject the Respondent to the provisions included in the "Force Majeure" and "Stipulated Penalties" sections (Sections XV and XVI) of this Consent Order.

No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondent will be construed as relieving Respondent of its obligation to obtain such formal approval of EPA as may be required by this Consent Order.

XXIV. NOTICE TO THE STATE

EPA has notified the State of Florida regarding the requirements of this Consent Order.

Upon completion of the Surface RI/FS, pursuant to the requirements of Section 104(c)(2) of CERCLA, 42 U.S.C. S 9604(c)(2), EPA will notify the State of Florida before determining the appropriate remedial action to be taken at the Site.

XXV. TERMINATION AND SATISFACTION

This Consent Order shall terminate when the Respondent demonstrates in writing and certifies to the satisfaction of EPA that all activities required under this Consent Order, including any additional work, payment of past costs, response and oversight costs, and any stipulated penalties demanded by EPA, have been performed and EPA has approved the certification. This notice shall not, however, terminate Respondent's obligation to comply with Sections XIII, XVII, and XVIII of this Consent Order.

The certification shall be signed by a responsible official representing each Respondent. Each representative shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete." For purposes of this Consent Order, a responsible official is a corporate official who is in charge of a principal business function.

IT IS SO AGREED:

BY: Bobby Pace
Helena Chemical Company
(Title) Vice President
Technical Services

8-25-92
Date

IT IS SO AGREED AND ORDERED:

BY: Joe R. Franzmathes
Joseph R. Franzmathes
Director
Waste Management Division
Region IV
U.S. Environmental Protection Agency

SEP 2 1992
Date

SCOPE OF WORK FOR THE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
AT THE HELENA CHEMICAL SITE
TAMPA, HILLSBOROUGH COUNTY, FLORIDA

INTRODUCTION

The purpose of this Remedial Investigation/Feasibility Study (RI/FS) is to investigate the nature and extent of contamination at the Helena Chemical Site (the "Site"), located in Tampa, Hillsborough County, Florida, assess the current and potential risk to public health, welfare, and the environment, and to develop and evaluate potential Remedial Action Alternatives. The RI and FS are interactive and shall be conducted concurrently so that the data collected in the RI influences the development of Remedial Action Alternatives in the FS, which in turn affects the data needs and the scope of Treatability Studies.

The Respondent shall conduct the RI/FS (except for the Baseline Risk Assessment component) and produce an RI/FS Report that is in accordance with this Scope of Work, the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, (Interim Final) (U.S. EPA Office of Emergency and Remedial Response, October 1988) (the "RI/FS Guidance"), the National Oil and Hazardous Substances Pollution Contingency Plan (March 8, 1990) and other guidances used by EPA in conducting an RI/FS (the primary guidances are listed in Attachment A), as well as any additional requirements in the Administrative Order. The RI/FS Guidance describes the report format and the required report content. Pertinent RI/FS Guidance section numbers are denoted in parenthesis throughout this Scope of Work. The Respondent shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI/FS, except as otherwise specified in the Administrative Order.

At the completion of the RI/FS, EPA shall be responsible for the selection of a remedy to be implemented for the Site. EPA will document this selection of a remedy in a Record of Decision (ROD). The Remedial Action Alternative selected by EPA will meet the cleanup standards specified in §121 of SARA. That is, the selected remedial action will be protective of human health and the environment, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws or regulations, and will address the statutory preference for on-site treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element. The Final

Remedial Investigation and Feasibility Study Report(s), as adopted by EPA, and EPA's Baseline Risk Assessment will, with the remainder of the Administrative Record, form the basis for the selection of the remedy to be implemented for the Site and will provide the information necessary to support the development of the ROD.

As specified in §104(a)(1) of CERCLA, as amended by SARA, EPA must provide oversight of the Respondents' activities throughout the RI/FS. The Respondent shall support EPA's initiation and conduct of activities related to the implementation of oversight activities. However, the primary responsibility for conducting an adequate RI/FS to enable and support the selection of a remedy shall lie with the Respondent. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA approval of a task or deliverable shall not be a guarantee as to the ultimate adequacy of such task or deliverable. A summary of the major deliverables that Respondent shall submit for the RI/FS is attached (Attachment B).

TASK 1 - SCOPING (RI/FS Guidance, Chapter 2)

Scoping is the initial planning process of the RI/FS and has been initiated by EPA to determine the site-specific objectives of the RI/FS prior to negotiations between the Respondent and EPA. Scoping is continued, repeated as necessary, and refined throughout the RI/FS process. In addition to developing the Site Objectives of the RI/FS, EPA has developed a Site Management Strategy. Consistent with the Site Management Strategy, the specific project scope shall be planned by the Respondent and EPA. The Respondent shall document the specific project scope in a Work Plan. Because the work required to perform an RI/FS is not fully known at the onset, and is phased in accordance with a Site's complexity and the amount of available information, it may be necessary to modify the Work Plan during the RI/FS to satisfy the objectives of the study.

The Site Objectives for the Helena Chemical Site, Tampa, Hillsborough County, Florida have been determined preliminarily, based on available information, to be the following:

1. Review of existing information pertaining to the Site. This review includes EPA Site Inspection Reports, the EPA Hazardous Ranking System Scoring package, reports from local, State and Federal agencies, court records, information from local businesses such as local well drillers and waste haulers and generators, facility records, and information from facility owners and employees and nearby citizens.

2. Review of relevant guidance (see attached references) to understand the remedial process. This information shall be used in performing the RI/FS and preparing all deliverables under this SOW.

3. Identification of all Federal and State applicable or relevant and appropriate requirements (ARARs).

4. Determination of the nature and lateral and vertical extent of contamination (waste types, concentrations and distributions) for all affected media including air, soil, surface water, and sediment, etc.

5. Performance of a well survey within a three mile radius of the Site including determining water uses, well construction methods used, the number and age of users, and the volume and rate of water usage.

6. Identification and screening of potential treatment technologies along with containment/disposal requirements for residuals or untreated wastes.

7. Assembly of technologies into Remedial Action Alternatives and screening of alternatives.

8. Performance of bench or pilot Treatability Studies as necessary.

9. Detailed analysis of Remedial Action Alternatives.

The Site Management Strategy for the Helena Chemical Site includes the following:

1. A complete investigation of the Site including any and all off-site contamination which may have been caused by contaminants originating from the Site.

2. Use of the RI to identify any other Potentially Responsible Parties that may be involved.

3. Evaluation of the Site including the possible partitioning of the Site into Operable Units, ie., an Operable Unit addressing groundwater contamination and a separate Operable Unit addressing surface and subsurface soil contamination.

4. An expectation that no interim remedial measures are required.

5. EPA oversight of the Respondents' conduct of the work (i.e., the RI/FS and any response action) to ensure compliance with applicable laws, regulations and guidances and to ensure that the

work proceeds in a timely fashion.

6. EPA preparation of the Baseline Risk Assessment.

7. EPA management of the Remedy Selection and Record of Decision phase with input from State Agencies, Natural Resource Trustees and the Public (including the Respondent).

When scoping the specific aspects of a project, the Respondent must meet with EPA to discuss all project planning decisions and special concerns associated with the Site. The following activities shall be performed by the Respondent as a function of the project planning process.

a. Site Background (2.2)

The Respondent shall gather and analyze the existing background information regarding the Site and shall conduct a visit to the Site to assist in planning the scope of the RI/FS.

Collect and Analyze Existing Data and Document the Need for Additional Data (2.2.2; 2.2.6; 2.2.7)

Before planning RI/FS activities, all existing Site data shall be thoroughly compiled and reviewed by the Respondent. Specifically, this compilation and review shall include currently available data relating to the varieties and quantities of hazardous substances at the Site and past disposal practices (what type of contaminants were dumped where, when, and by whom). This compilation and review shall also include results from any previous sampling or other investigations that may have been conducted. The Respondent shall refer to Table 2-1 of the RI/FS Guidance for a comprehensive list of data collection information sources. This information shall be utilized in determining additional data needed for Site Characterization, better defining potential applicable or relevant and appropriate requirements (ARARs), and developing a range of preliminarily identified Remedial Action Alternatives. Subject to EPA approval, Data Quality Objectives (DQOs) shall be established that specify the usefulness of existing data. Decisions on the necessary data and DQOs shall be made by EPA.

Conduct Site Visit

The Respondent shall conduct a visit to the Site with the EPA Remedial Project Manager (RPM) during the project scoping phase to assist in developing a conceptual understanding of sources and areas of contamination as well as potential exposure pathways and receptors at the Site. During the visit to the Site the Respondent shall observe

the physiography, hydrology, geology, and demographics of the Site as well as related natural resource, ecological and cultural features. This information shall be utilized to better scope the project and to determine the extent of additional data necessary to characterize the Site, better define potential ARARs, and narrow the range of preliminarily identified Remedial Action Alternatives.

b. Project Planning (2.2)

Once the Respondent has collected and analyzed existing data and conducted a visit to the Site, the specific project scope shall be planned. Project planning activities include those tasks described below as well as the development of specific required deliverables as described in paragraph c. The Respondent shall meet with EPA regarding the following activities and before the drafting of the scoping deliverables.

Refine the Site Objectives and Develop Preliminary Remedial Action Objectives and Alternatives (2.2.3)

Once existing information about the Site has been analyzed and a conceptual understanding of the potential risks posed by the Site has been obtained, the Respondent shall review and, if necessary, refine the Site Objectives and develop preliminary remedial action objectives for each actually or potentially contaminated medium. Any revised Site Objectives shall be documented in a technical memorandum and are subject to EPA approval prior to development of the other scoping deliverables. The Respondent shall then identify a preliminary range of broadly defined potential Remedial Action Alternatives and associated technologies. The range of potential alternatives shall include, at a minimum, alternatives in which treatment is used to reduce the toxicity, mobility, or volume of the waste, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; alternatives that involve containment and treatment components; alternatives that involve containment with little or no treatment; and a no-action alternative.

Document the Need for Treatability Studies (2.2.4)

If remedial actions involving treatment have been identified by the Respondent or EPA, Treatability Studies shall be required except where the Respondent can demonstrate to EPA's satisfaction that they are not needed. Where Treatability Studies are needed, identification of possible technologies and screening shall be done and the results submitted with the RI/FS Work Plan. Initial Treatability Study activities (such as research and study design) shall be planned to occur concurrently with Site Characterization

activities (see Tasks 3 and 4).

Begin Preliminary Identification of Potential ARARs (2.2.5)

The Respondent shall conduct a preliminary identification of potential State and Federal ARARs (chemical-specific, location-specific, and action-specific) to assist in the refinement of remedial action objectives and the initial identification of Remedial Action Alternatives and ARARs associated with particular actions. ARAR identification shall continue as conditions and contaminants at the Site and Remedial Action Alternatives are better defined.

c. Scoping Deliverables (2.3)

At the conclusion of the project planning phase, the Respondent shall submit an RI/FS Work Plan, a Sampling and Analysis Plan, and a Health and Safety Plan. The RI/FS Work Plan and Sampling and Analysis Plan must be reviewed and approved and the Health and Safety Plan reviewed by EPA prior to the initiation of field activities.

RI/FS Work Plan (2.3.1)

A Work Plan documenting the decisions and evaluations completed during the scoping process shall be submitted to EPA for review and approval. The Work Plan shall be developed in conjunction with the Sampling and Analysis Plan and the Health and Safety Plan, although each plan may be delivered under separate cover. The Work Plan shall include a comprehensive description of the work to be performed, the medias to be investigated (i.e., Air, Surface Water, Surface and Subsurface Soils, and Sediments, etc.), the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity and submission of each deliverable shall also be included.

Specifically, the Work Plan shall present the following:

- A statement of the problem(s) and potential problem(s) posed by the Site and the objectives of the RI/FS.

- A background summary setting forth the following:

  - a description of the Site including the geographic location, and, to the extent possible, a description of the physiography, hydrology, geology, demographics, and the ecological, cultural, and natural resource features of the Site;

- a synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties at the Site;

- a summary of the existing data in terms of physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the Site.

- A description of the Site Management Strategy developed by EPA during scoping as discussed previously in this SOW and as may be modified with EPA's approval;

- A preliminary identification of Remedial Action Alternatives and data needs for evaluation of Remedial Action Alternatives. This preliminary identification shall reflect coordination with Treatability Study requirements (see Tasks 1 and 4).

- A process for identifying Federal and State ARARs (chemical-specific, location-specific, and action-specific).

- A statement recognizing EPA's preparation of the Baseline Risk Assessment.

- A detailed description of the tasks to be performed, information needed for each task and for EPA's Baseline Risk Assessment, information to be produced during and at the conclusion of each task, and a description of the work products that shall be submitted to EPA. This description must also include the deliverables set forth in the remainder of this Scope of Work.

- A schedule for each of the required activities which is consistent with the RI/FS Guidance.

- A project management plan, including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, data format, and backup data management), monthly reports to EPA, and meetings and presentations to EPA at the conclusion of each major phase of the RI/FS.

The Respondent shall refer to Appendix B of the RI/FS Guidance for a comprehensive description of the contents of the required Work Plan.

Because of the unknown nature of the Site and iterative nature of the RI/FS, additional data requirements may be identified throughout the RI/FS process. The Respondent shall submit a technical memorandum documenting any need for

additional data along with the proposed DQOs whenever such requirements are identified. In any event, the Respondent are responsible for fulfilling additional data and analysis needs identified by EPA consistent with the general scope and objectives of this RI/FS and the Administrative Order.

Sampling and Analysis Plan (2.3.2)

The Respondent shall prepare a Sampling and Analysis Plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs established. The SAP provides a mechanism for planning field activities and consists of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs will, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the proposed National Contingency Plan, pages 51425-26 and 51433 (December 21, 1988). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (February 1, 1991). Field personnel shall be available for EPA QA/QC training and orientation, as required.

The Respondent shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This demonstration must include use of methods and analytical protocols for the chemicals of concern (typically the Target Compound List (TCL) and the Target Analyte List (TAL)) in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved by EPA in the QAPP for the Site. The laboratory must have and follow an EPA-approved QA program. The Respondent shall provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection,

transportation, and analysis. EPA may require that the Respondent submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory. If a laboratory not currently participating in the CLP is selected, methods consistent with CLP methods that would be used at this Site for the purposes proposed and QA/QC procedures approved by EPA shall be used. In addition, if the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval granted prior to the shipment of Site samples to that laboratory for analysis.

Health and Safety Plan (2.3.3)

A Health and Safety Plan shall be prepared in conformance with the Respondents' health and safety program, and in compliance with OSHA regulations and protocols. The Health and Safety Plan shall include the eleven elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. It should be noted that EPA does not "approve" the Respondents' Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

TASK 2 - COMMUNITY RELATIONS (2.3.4)

The development and implementation of community relations activities are the responsibility of EPA. The critical community relations planning steps performed by EPA include conducting community interviews and developing a community relations plan. Although implementation of the community relations plan is the responsibility of EPA, the Respondent may be requested to assist by providing information regarding the history of the Site and participating in public meetings. The extent of the Respondents' involvement in community relations activities is left to the discretion of EPA. The Respondents' community relations responsibilities, if any, shall be specified in the community relations plan. All community relations activities conducted by Respondent shall be subject to oversight by EPA.

Note that the State of Florida requires the posting of Warning Signs at National Priority List Sites (Proposed or Final) by Potentially Responsible Parties (see Florida Administrative Code Chapter 17-736).

EPA shall prepare three or more Baseline Risk Assessment memoranda which will summarize the toxicity assessment and human and ecological exposure assessment components of the Baseline Risk Assessment. EPA shall make these memoranda available to all interested parties for comment by placing them in the information repository EPA shall establish for the Site and placing them in the Administrative Record. EPA, however, is not required to formally respond to comments except during the formal comment period which occurs after a Proposed Plan is issued.

TASK 3 - SITE CHARACTERIZATION (RI/FS Guidance, Chapter 3)

As part of the RI, the Respondent shall perform the activities described in this task, including the preparation of a Site Characterization Summary and a RI Report. The overall objective of Site Characterization is to describe areas of the Site that may pose a threat to human health or the environment. This objective is accomplished by first determining physiography, geology, and hydrology of the Site. Surface and subsurface pathways of migration shall also be defined. The Respondent shall identify the sources of contamination and define the nature, extent, and volume of the sources of contamination, including their physical and chemical constituents as well as their concentrations at incremental locations in the affected media. The Respondent shall also investigate the extent of migration of this contamination as well as its volume and any changes in its physical or chemical characteristics. This investigation will provide for a comprehensive understanding of the nature and extent of contamination at the Site. Using this information, contaminant fate and transport shall be determined and projected.

During this phase of the RI/FS, the Work Plan, SAP, and Health and Safety Plan shall be implemented. Field data shall be collected and analyzed to provide the information required to accomplish the objectives of the study. The Respondent shall notify EPA at least two weeks in advance of the field work regarding the planned dates for field activities, including installation of monitoring wells, installation and calibration of equipment, pump tests, field lay out of any sampling grid, excavation, sampling and analysis activities, and other field investigation activities. The Respondent shall demonstrate that the laboratory and type of laboratory analyses that will be utilized during Site Characterization meets the specific QA/QC requirements and the DQOs as specified in the SAP. In view of the unknown conditions at the Site, activities are often iterative and, to satisfy the objectives of the RI/FS, it may be

necessary for the Respondent to supplement the work specified in the initial Work Plan. In addition to the deliverables below, the Respondent shall provide a monthly progress report and participate in meetings with EPA at major points in the RI/FS.

a. Field Investigation (3.2)

The field investigation includes the gathering of data to define physical characteristics, sources of contamination, and the nature and extent of contamination at the Site. These activities shall be performed by the Respondent in accordance with the Work Plan and SAP. At a minimum, this investigation shall include the following activities:

Implementing and Documenting Field Support Activities (3.2.1)

The Respondent shall initiate field support activities following approval of the Work Plan and SAP. Field support activities may include obtaining access to the Site, property surveys, scheduling, and procuring equipment, office space, laboratory services, utility services and/or contractors. The Respondent shall notify EPA at least two weeks prior to initiating field support activities so that EPA may adequately schedule oversight tasks. The Respondent shall also notify EPA in writing upon completion of field support activities.

Investigating and Defining Site Physical and Biological Characteristics (3.2.2)

The Respondent shall collect data on the physical and biological characteristics of the Site and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics identified in the Work Plan. This information shall be ascertained through a combination of physical measurements, observations, and sampling efforts and shall be utilized to define potential transport pathways and receptor populations. In defining the physical characteristics of the Site, the Respondent shall also obtain sufficient engineering data (such as pumping characteristics, soil particle size, permeability, etc.) for the projection of contaminant fate and transport and the development and screening of Remedial Action Alternatives, including information necessary to evaluate treatment technologies.

Defining Sources of Contamination (3.2.3)

The Respondent shall locate each source of contamination. For each location, the lateral and vertical extent of contamination shall be determined by sampling at incremental

depths on a sampling grid or in another organized fashion approved by EPA. The physical characteristics and chemical constituents and their concentrations shall be determined for all known and discovered sources of contamination. The Respondent shall conduct sufficient sampling to define the boundaries of the contaminant sources to the level established in the QA/QC plan and DQOs. Sources of contamination shall be analyzed for the potential of contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating remedial actions, including information necessary to evaluate treatment technologies.

Describing the Nature and Extent of Contamination (3.2.4)

The Respondent shall gather information to describe the nature and extent of contamination as a final step during the field investigation. To describe the nature and extent of contamination, the Respondent shall utilize the information on Site physical characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. The Respondent shall then implement an iterative monitoring program and any study program identified in the Work Plan or SAP such that, by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at the Site can be determined. In addition, the Respondent shall gather data for calculations of contaminant fate and transport. This process is continued until the lateral and vertical extent of contamination has been determined to the contaminant concentrations consistent with the established DQOs set forth in the QAAP. EPA shall use the information on the nature and extent of contamination to determine the level of risk presented by the Site.

Respondent shall use this information to help to determine aspects of the appropriate Remedial Action Alternatives to be evaluated.

b. Data Analyses (3.4)

Evaluate Site Characteristics (3.4.1)

The Respondent shall analyze and evaluate the data to describe: (1) physical and biological characteristics of the Site; (2) contaminant source characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. The information on physical and biological characteristics, source characteristics, and nature and extent of contamination shall be used in the analysis of contaminant fate and transport. The evaluation shall

include the actual and potential magnitude of releases from the sources and lateral and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use. The RI data shall be presented in a computer disk format utilizing Lotus 1-2-3 or other equivalent commonly used computer software to facilitate EPA's preparation of the Baseline Risk Assessment. Respondent shall then collect any data identified by EPA as necessary to fill data gaps that EPA determines are present during preparation of the Baseline Risk Assessment (see "Guidance for Data Useability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, October 1990, OSWER Directive No. 9285.7-05). Also, this evaluation shall provide any information relevant to characteristics of the Site necessary for evaluation of the need for remedial action in EPA's Baseline Risk Assessment, the development and evaluation of Remedial Action Alternatives, and the refinement and identification of ARARs. Analyses of data collected for Site Characterization shall meet the DQOs developed in the QAPP.

c. Data Management Procedures (3.5)

The Respondent shall consistently document the quality and validity of field and laboratory data compiled during the RI. At a minimum, this documentation shall include the following activities:

Documenting Field Activities (3.5.1)

Information gathered during characterization of the Site shall be consistently documented and adequately recorded by the Respondent in well maintained field logs and laboratory reports. The method(s) of documentation must be specified in the Work Plan and/or the SAP. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies. Supporting documentation described as the "CLP Data Package" must be provided with the sample analysis for all samples split or duplicated with EPA.

Maintaining Sample Management and Tracking (3.5.2; 3.5.3)

The Respondent shall maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of the Baseline Risk Assessment and Remedial Action Alternatives. Analytical results developed under the Work Plan shall not be included in any characterization reports for the Site unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the Respondent shall establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation.

d. Site Characterization Deliverables (3.7)

The Respondent shall prepare the Preliminary Site Characterization Summary and the Remedial Investigation Report.

Preliminary Site Characterization Summary (3.7.2)

After completing field sampling and analysis, the Respondent shall prepare a concise Site Characterization Summary. This summary shall review the investigative activities that have taken place and describe and display data for the Site documenting the location and characteristics of surface and subsurface features and contamination at the Site including the affected medium, location, types, physical state, and quantity and concentrations of contaminants. In addition, the location, dimensions, physical condition, and varying concentrations of each contaminant throughout each source and the extent of contaminant migration through each of the affected media shall be documented. The RI data shall be presented in a computer disk format utilizing Lotus 1-2-3 or other equivalent commonly used computer software to facilitate EPA's preparation of the Baseline Risk Assessment. The Site Characterization Summary shall provide EPA with a preliminary reference for developing the Baseline Risk Assessment and remediation goals, evaluating the development and screening of Remedial Action Alternatives, and the refinement and identification of ARARs.

Remedial Investigation (RI) Report (3.7.3)

The Respondent shall prepare and submit a Draft RI Report to EPA for review and approval. This report shall summarize results of field activities to characterize the Site, sources of contamination, nature and extent of contamination, and the fate and transport of contaminants. The Respondent shall refer to the RI/FS Guidance for an outline of the report format and contents. Following

comment by EPA, the Respondent shall prepare a Final RI Report which satisfactorily addresses EPA's comments.

TASK 4 - TREATABILITY STUDIES (RI/FS Guidance, Chapter 5)

Treatability Studies shall be performed by the Respondent to assist in the detailed analysis of alternatives. If applicable, study results and operating conditions will later be used in the detailed design of the selected remedial technology. The following activities shall be performed by the Respondent.

a. Determination of Candidate Technologies and the Need for Treatability Studies (5.2; 5.4)

The Respondent shall identify in a technical memorandum, subject to EPA review and comment, candidate technologies for a Treatability Studies program during project planning (Task 1). The listing of candidate technologies shall cover the range of technologies required for alternatives analysis (Task 5a). The specific data requirements for the Treatability Studies program shall be determined and refined during Site Characterization and the development and screening of Remedial Action Alternatives (Tasks 3 and 4, respectively).

Conduct Literature Survey and Determine the Need for Treatability Studies (5.2)

The Respondent shall conduct a literature survey to gather information on performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. If practical candidate technologies have not been sufficiently demonstrated, or cannot be adequately evaluated for the Site on the basis of available information, Treatability Studies shall be conducted. EPA shall determine whether Treatability Studies will be required.

Evaluate Treatability Studies (5.4)

Where EPA has determined that Treatability Studies are required, the Respondent and EPA shall decide on the type of Treatability Studies to use (e.g., bench versus pilot). Because of the time required to design, fabricate, and install pilot scale equipment as well as to perform testing for various operating conditions, the decision to perform pilot testing shall be made as early in the process as possible to minimize potential delays of the FS. To assure that a Treatability Study

program is completed on time, and with accurate results, the Respondent shall either submit a separate Treatability Study Work Plan or an amendment to the original RI/FS Work Plan for EPA review and approval.

b. Treatability Study Deliverables (5.5; 5.6; 5.8)

In addition to the memorandum identifying candidate technologies, the deliverables that are required when Treatability Studies are to be conducted include a Treatability Study Work Plan, a Treatability Study Sampling and Analysis Plan, and a Final Treatability Study Evaluation Report. EPA may also require a Treatability Study Health and Safety Plan, where appropriate.

Treatability Study Work Plan (5.5)

The Respondent shall prepare a Treatability Study Work Plan or amendment to the original RI/FS Work Plan for EPA review and approval. This Plan shall describe the background of the Site, remedial technologies to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The DQOs for Treatability Studies shall be documented as well. If pilot-scale Treatability Studies are to be performed, the Treatability Study Work Plan shall describe pilot plant installation and start-up, pilot plant operation and maintenance procedures, and operating conditions to be tested. If testing is to be performed off-site, permitting requirements must be addressed.

Treatability Study Sampling and Analysis Plan (5.5)

If the original QAPP or FSAP is not adequate for defining the activities to be performed during the Treatability Studies, a separate Treatability Study SAP or amendment to the original RI/FS SAP shall be prepared by the Respondent for EPA review and approval. It shall be designed to monitor pilot plant performance. Task 1c of this Scope of Work provides additional information on the requirements of the SAP.

Treatability Study Health and Safety Plan (5.5)

If the original RI/FS Health and Safety Plan is not adequate for defining the activities to be performed during the Treatability Studies, a separate or amended Health and Safety Plan shall be developed by the Respondent. Task 1c of this Scope of Work provides additional information on the requirements of the

Health and Safety Plan. EPA does not "approve" the Treatability Study Health and Safety Plan.

Treatability Study Evaluation Report (5.6)

Following completion of Treatability Studies, the Respondent shall analyze and interpret the testing results in a technical report to EPA. Depending on the sequence of activities, this report may be a part of the RI/FS Report or a separate deliverable. The report shall evaluate each technology's effectiveness, implementability, cost, and actual results as compared with predicted results. The report shall also evaluate full-scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

TASK 5 - DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES (RI/FS Guidance, Chapter 4)

The development and screening of Remedial Action Alternatives is performed to select an appropriate range of waste management options to be evaluated. This range of options shall include, at a minimum, alternatives in which treatment is used to reduce the toxicity, mobility, or volume of the waste, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; alternatives that involve containment and treatment components; alternatives that involve containment with little or no treatment; and a no-action alternative. The following activities shall be performed by the Respondent as a function of the development and screening of Remedial Action Alternatives.

a. Development and Screening of Remedial Action Alternatives (4.2)

The Respondent shall begin to develop and evaluate, concurrent with the RI Site Characterization task, a range of appropriate waste management options that, at a minimum, ensure protection of human health and the environment and comply with all ARARs.

Refine and Document Remecial Action Objectives

The Respondent shall review and, if necessary, propose refinement to the Site Objectives and preliminary remedial action objectives that were established during the Scoping phase (Task 1). Any revised Site Objectives or revised remedial action objectives shall be documented in a technical memorandum as discussed in Task 1b. These objectives shall specify the contaminants and media of interest, exposure pathways and receptors, and an acceptable contaminant level or

range of levels (at particular locations for each exposure route).

Develop General Response Actions (4.2.2)

The Respondent shall develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the remedial action objectives.

Identify Areas and Volumes of Media (4.2.3)

The Respondent shall identify areas and volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The chemical and physical characterization of the Site and the Baseline Risk Assessment and remediation goals shall also be taken into account.

Identify, Screen, and Document Remedial Technologies (4.2.4; 4.2.5)

The Respondent shall identify and evaluate technologies applicable to each general response action to eliminate those that cannot be implemented at the Site. General response actions shall be refined to specify remedial technology types. Technology process options for each of the technology types shall be identified either concurrent with the identification of technology types or following the screening of the considered technology types. Process options shall be evaluated on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The technology types and process options shall be summarized for inclusion in a technical memorandum. The reasons for eliminating alternatives must be specified.

Assemble and Document Alternatives (4.2.6)

The Respondent shall assemble selected representative technologies into alternatives for each affected medium or operable unit. Together, all of the alternatives shall represent a range of treatment and containment combinations that shall address either the Site or the operable unit as a whole. A summary of the assembled alternatives and their related action-specific ARARs shall be prepared by the Respondent for inclusion in a technical memorandum. The reasons for eliminating alternatives during the preliminary screening process must be specified.

Refine Alternatives

The Respondent shall refine the Remedial Action Alternatives to identify contaminant volumes to be addressed by the proposed process and sizing of critical unit operations as necessary. Sufficient information shall be collected for an adequate comparison of alternatives. Remedial action objectives for each medium shall also be refined as necessary to incorporate any new risk assessment information presented in EPA's Baseline Risk Assessment Report. Additionally, action-specific ARARs shall be updated as the Remedial Action Alternatives are refined.

Conduct and Document Screening Evaluation of Each Alternative (4.3)

The Respondent may perform a final screening process based on short and long term aspects of effectiveness, implementability, and relative cost. Note that the evaluation of effectiveness involves evaluating the long-term and short-term risks - among other factors - associated with a remedial alternative. Generally, this screening process is only necessary when there are many feasible alternatives available for detailed analysis. If necessary, the screening of alternatives shall be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis.

As appropriate, the screening shall preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives shall include options that use treatment technologies and permanent solutions to the maximum extent practicable. The Respondent shall prepare a technical memorandum summarizing the results and reasoning employed in screening, arraying alternatives that remain after screening, and identifying the action-specific ARARs for the alternatives that remain after screening.

b. Alternatives Development and Screening Deliverables (4.5)

The Respondent shall prepare a technical memorandum summarizing the work performed and the results of each task above, including an alternatives array summary. This alternatives array shall be modified by the Respondent when conducting Task 6 if required by EPA's comments to assure identification of a complete and

appropriate range of viable alternatives to be considered in the detailed analysis. This deliverable shall document the methods, rationale, and results of the alternatives screening process.

TASK 6 - DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES (RI/FS Guidance, Chapter 6)

The detailed analysis shall be conducted by the Respondent to provide EPA with the information needed to allow for the selection of a remedy for the Site.

a. Detailed Analysis of Alternatives (6.2)

The Respondent shall conduct a detailed analysis of remaining alternatives. This analysis shall consist of an assessment of each option against a set of nine evaluation criteria and a comparative review of all options using the same nine evaluation criteria as a basis for comparison.

Apply Nine Criteria and Document Analysis (6.2.1 - 6.2.4)

The Respondent shall apply nine evaluation criteria to the assembled Remedial Action Alternatives to ensure that the selected Remedial Action Alternative will be protective of human health and the environment; will be in compliance with, or include a waiver of, ARARs; will be cost-effective; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and will address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State acceptance; and (9) community acceptance. Criteria 8 and 9 are considered after the RI/FS Report has been released to the general public. For each alternative, the Respondent shall provide: (1) a description of the alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative; and (2) a discussion of the individual criterion assessment. Since the Respondent do not have direct input on criteria (8) State acceptance and (9) community acceptance, these two criteria will be addressed by EPA after completion of the Draft FS Report.

Compare Alternatives Against Each Other and Document the Comparison of Alternatives (6.2.5; 6.2.6)

The Respondent shall perform a comparative analysis among the Remedial Action Alternatives. That is, each alternative shall be compared against the others using the nine evaluation criteria as a basis of comparison. No alternative shall be identified by Respondent as the preferred alternative in the Feasibility Study. Identification and selection of the preferred alternative is conducted by EPA.

b. Detailed Analysis Deliverables (6.5)

The Respondent shall prepare a Draft FS Report for EPA review and comment. This report, as ultimately adopted or amended by EPA, provides a basis for remedy selection by EPA and documents the development and analysis of Remedial Action Alternatives. The Respondent shall refer to the RI/FS Guidance for an outline of the report format and the required report content. The Respondent shall prepare a Final FS Report which satisfactorily addresses EPA's comments. Once EPA's comments have been addressed by the Respondent to EPA's satisfaction and EPA approval has been obtained or an amendment has been furnished by EPA, the Final FS Report may be bound with the Final RI Report.

ATTACHMENT A
REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

1. The National Oil and Hazardous Substances Pollution Contingency Plan, March 8, 1990.

2. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final" U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.

3. "Interim Guidance on Potentially Responsible Party Participation in Remedial Investigation and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, Appendix A to OSWER Directive No. 9355.3-01.

4. "Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.3.

5. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.

6. "EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984, EPA-330/9-78-001-R.

7. "Data Quality Objectives for Remedial Response Activities," U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.

8. "Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.

9. "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.

10. "Users Guide to the EPA Contract Laboratory Program," U.S. EPA, Sample Management Office, December 1986.

11. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," U.S. EPA, Office of Emergency

and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.

12. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.

13. "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (Draft), OSWER Directive No. 9283.1-2.

14. "Draft Guidance on Preparing Superfund Decision Documents," U.S. EPA, Office of Emergency and Remedial Response, March 1988, OSWER Directive No. 9355.3-02

15. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part A," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002A, December 1989, OSWER Directive No. 9285.7-01a.

16. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part B," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002B, OSWER Directive No. 9285.7-01b.

17. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part C," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002C, OSWER Directive No. 9285.7-01c.

18. "Interim Final Risk Assessment Guidance for Superfund - Volume II - Environmental Evaluation Manual," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/001, March 1989, OSWER Directive No. 9285.7-01.

19. "Superfund Exposure Assessment Manual," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-88/001, April 1988, OSWER Directive No. 9285.5-1.

20. "Guidance for Data Useability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/G-90/008, October 1990, OSWER Directive No. 9285.7-05.

21. "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," April 22, 1991, OSWER Directive No. 9355.0-30.

22. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.

23. OSHA Regulations in 29 CFR 1910.120 (Federal Register 45654, December 19, 1986).

24. "Interim Guidance on Administrative Records for Selection of CERCLA Response Actions," U.S. EPA, Office of Waste Programs Enforcement, March 1, 1989, OSWER Directive No. 9833.3A.

25. "Community Relations in Superfund: A Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0-3B.

26. "Community Relations During Enforcement Activities And Development of the Administrative Record," U.S. EPA, Office of Waste Programs Enforcement, November 1988, OSWER Directive No. 9836.0-1A.

27. "Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual", U.S. EPA Region IV, Environmental Services Division, February 1, 1991 (revised periodically).

28. "USEPA Contract Laboratory Program Statement of Work for Organics Analysis", U.S. EPA, Office of Emergency and Remedial Response, February 1988.

29. "USEPA Contract Laboratory Program Statement of Work for Inorganics Analysis", U.S. EPA, Office of Emergency and Remedial Response, July 1988.

ATTACHMENT B
SUMMARY OF THE MAIN DELIVERABLES FOR THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY AT THE HELENA CHEMICAL SITE
TAMPA, HILLSBOROUGH COUNTY, FLORIDA

TASK	DELIVERABLE	EPA RESPONSE
TASK 1	SCOPING	
	- RI/FS Work Plan (15)	Review and Approve
	- Field Sampling and Analysis Plan (15)	Review and Approve
	- Quality Assurance Project Plan (5)	Review and Approve
	- Site Health and Safety Plan (5)	Review and Comment
TASK 3	SITE CHARACTERIZATION	
	- Technical Memorandum on Contaminant Fate and Transport Modeling (where appropriate) (5)	Review and Approve
	- Preliminary Site Characterization Summary (15)	Review and Comment
	- Remedial Investigation (RI) Report (15)	Review and Approve
TASK 4	TREATABILITY STUDIES	
	- Technical Memorandum Identifying Candidate Technologies (10)	Review and Comment
	- Treatability Study Work Plan (or amendment to original Work Plan) (10)	Review and Approve
	- Treatability Study SAP (or amendment to original SAP) (10)	Review and Approve

	- Treatability Study Evaluation Report (10)	Review and Approve
TASK 5	DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES	
	- Technical Memorandum Documenting Revised Remedial Action Objectives (5)	Review and Approve
	- Technical Memorandum on Remedial Technologies, Alternatives, and Screening (5)	Review and Comment
TASK 6	DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES	
	- Feasibility Study (FS) Report (15)	Review and Approve

Note: The number in parenthesis indicates the number of copies to be submitted by Respondent. One copy shall be unbound, the remainder shall be bound. Also, see the Administrative Order on Consent for additional reporting requirements and further instructions on submittal and dispositions of deliverables.

10 11 0024

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

IN THE MATTER OF: HELENA CHEMICAL COMPANY Superfund Site Tampa, Florida Helena Chemical Company Respondent	Proceeding under Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. SS 9604 and 9622. EPA Docket No.: 92-32-C

MODIFICATION TO ADMINISTRATIVE ORDER BY CONSENT FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

WHEREAS, the United States Environmental Protection Agency ("EPA") and Helena Chemical Company ("Respondent") (collectively, the "Parties") entered into an Administrative Order by Consent for Remedial Investigation/Feasibility Study ("AOC"), effective September 2, 1992;

WHEREAS, the AOC requires the Respondent to perform a remedial investigation and feasibility study ("RI/FS") to study surface conditions, excluding groundwater, at the Helena Chemical Corporation Site ("Site") in Tampa, Florida; and

WHEREAS, the Parties desire to modify the AOC to require performance of an RI/FS to study the condition of all media, including groundwater, at the Site;

the Parties mutually agree to enter into this Modification to Administrative Order by Consent for Remedial Investigation/Feasibility Study ("Modification"). Pursuant to this Modification, the Parties agree to the following changes to the AOC:

1. Scope

The scope of the AOC, as modified by this Modification, is expanded to require the Respondent to perform a complete RI/FS for all media, including groundwater, at the Site. References in the AOC to "Surface RI/FS", "Surface RI/FS Work Plan" or "Surface RI/FS Workplan", "draft Surface RI Report", "Surface Remedial Investigation Final Report", "draft Surface Feasibility Study", "draft Surface FS Report", and "Surface Feasibility Study Final Report" shall be modified by deleting the word "Surface".

2. Scheduling

Paragraph A of Section VII (Work to be Performed) of the AOC shall be modified by deleting "Within forty-five (45) calendar days of the effective date of this Consent Order" and replacing the deleted language with "Not later than November 2, 1992".

All other terms and provisions of the AOC remain in effect.

IT IS SO AGREED:

BY: Bobby Pace
Helena Chemical Company
(Title)

11-2-92.
Date

IT IS SO AGREED AND ORDERED:

BY: David W. Kluzmann Jr
Joseph R. Franzmathes
Director
Waste Management Division
Region IV
U.S. Environmental Protection Agency

11/4/92
Date

10 11 0026

Helena Chemical
10.11

5805

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

IN THE MATTER OF: HELENA CHEMICAL COMPANY Superfund Site Tampa, Florida Helena Chemical Company Respondent	Proceeding under Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §§ 9604 and 9622. EPA Docket No.: 92-32-C

SECOND MODIFICATION TO ADMINISTRATIVE ORDER BY CONSENT FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

WHEREAS, the United States Environmental Protection Agency ("EPA") and Helena Chemical Company ("Respondent") (collectively, the "Parties") entered into an Administrative Order by Consent for Remedial Investigation/Feasibility Study ("AOC"), effective September 2, 1992;

WHEREAS, the Parties modified the AOC effective November 6, 1992;

WHEREAS, the AOC, as modified, requires the Respondent to perform a Remedial Investigation and Feasibility Study ("RI/FS") to study conditions, at the Helena Chemical Corporation Site ("Site") in Tampa, Florida; and

WHEREAS, the AOC, as modified, requires the Respondent to submit a draft Remedial Investigation Report within 180 days of receipt by Respondent of EPA approval of the RI/FS Work Plan, and requires Respondent to submit a draft Feasibility Study Report within 120 days of receipt by Respondent of the Baseline Risk Assessment from EPA;

WHEREAS, the Parties desire to modify the AOC, as modified, by amending the deadlines for submittal of the draft Remedial Investigation Report and the draft Feasibility Study Report;

WHEREAS, the Parties mutually agree to enter into this Second Modification to Administrative Order by Consent for Remedial Investigation/Feasibility Study ("Second Modification"). Pursuant to this Second Modification, the Parties agree to the following changes to the AOC, as modified:

1. Paragraph A of Section VII (Work to be Performed) of the AOC, as modified, shall be modified by deleting "within 180 calendar days of the receipt by Respondent of notification of the approval of the RI/FS Work Plan" and replacing the deleted language with "not later than "February 15, 1994."

2. Paragraph A of Section VII (Work to be Performed) of the AOC, as modified, shall be modified by deleting "within 120 calendar days of the receipt by Respondent of the Baseline Risk Assesment from EPA" and adding "within 90 calender days of receipt by respondent of the Baseline Risk Assesment from EPA".

All other terms and provisions of the AOC remain in effect.

IT IS SO AGREED:

BY: Bobby Pace 11-19-93
Helena Chemical Company Date
(Title)

IT IS SO AGREED AND ORDERED:

BY: Richard D. Green, Deputy 12/2/93
Joseph R. Franzmathes Date
Director
Waste Management Division
Region IV
U.S. Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

IN THE MATTER OF:	)	
	)	
	)	U.S. EPA DOCKET NO.: 89-18-C
	)	
HELENA CHEMICAL SITE FAIRFAX, SOUTH CAROLINA	)	Proceeding under Sections 104 and 122 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. Sections 9604 and 9622), as amended by the Superfund Amendments and Reauthorization Act of 1986, P.L. 99-499, October 17, 1986.
HELENA CHEMICAL COMPANY	)	
Respondent.	)	

ADMINISTRATIVE ORDER BY CONSENT

I. JURISDICTION

This Administrative Order by Consent (hereafter called "Consent Order") is entered into by the United States Environmental Protection Agency (hereafter called "EPA") with the Respondent who has executed this Consent Order pursuant to the authority vested in the President of the United States by Sections 104 and 122(d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (hereafter called "CERCLA"), 42 U.S.C. Sections 9604 and 9622(d)(3), as amended by the Superfund Amendments and Reauthorization Act of 1986 (hereafter called "SARA"). The President delegated this authority to the Administrator of EPA by Executive Order 12580 dated January 23, 1987, 52 Federal Register 2923 (January 29, 1987). This authority has been further delegated to the Regional Administrator of EPA Region IV.

The Respondent agrees to undertake all actions required of it by the terms and conditions of this Consent Order for the conduct and implementation of a Remedial Investigation and Feasibility Study at the Helena Chemical Site and any additional work agreed to by the parties pursuant to Section VI.K. below.

Respondent consents to jurisdiction for purposes of entry and enforcement of this Consent Order by EPA. The Findings of Fact and Conclusions of Law are effective only for purposes of this Consent Order and are not binding in any other proceeding. Respondent reserves all rights it may have to object to or contest any allegations of violation of this Consent Order. Nothing in the Findings of Fact or Conclusions of Law or determinations made herein constitute an admission of fact or liability by Respondent; however, Respondent agrees not to challenge these findings or conclusions solely for purposes of enforcement of this Consent Order.

Nothing contained in this Order shall create any presumption of law or fact for any third party in any other proceeding. Furthermore, Respondent specifically neither admits nor denies liability under CERCLA /SARA or any other statutory or common law and any responsibility for response costs or damages thereunder, and does not, by signing this Consent Order, waive any rights it may have to assert claims under CERCLA/SARA against any person as defined in Section 101(21) of CERCLA, 42 U.S.C. Section 9601(21).

II. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objectives of EPA and the Respondent are: (1) to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release or threatened release of hazardous substances, pollutants and/or contaminants from the Site (Remedial Investigation), and (2) to determine and evaluate alternatives for the appropriate extent of remedial action to prevent or mitigate the migration or the release or threatened release of hazardous substances, pollutants and/or contaminants from the Site (Feasibility Study). This Consent Order does not cover any remedial actions to be implemented at the Site. The activities conducted pursuant to this Consent Order are subject to approval by EPA and shall be consistent with the National Contingency Plan, 40 C.F.R. Part 300.68(a) - (j).

III. FINDINGS OF FACT

The following constitutes an outline of the facts upon which this Consent Order is based:

A. The Helena Chemical Site is located off U.S. Highway 321, south of Fairfax, South Carolina.

B. The Site consists of a pesticide contaminated debris disposal area and will be further defined by the RI/FS process.

C. EPA alleges that the Respondent is an owner/operator of the Site. The site was formerly owned/operated by Mitchell Insecticide Company and Blue Chemical Company. Additional potentially responsible parties may be identified.

D. In June 1988, the Site was proposed for inclusion on the National Priorities List, as defined in Section 105 of CERCLA, 42 U.S.C. Section 9605.

E. On October 1, 1981, the South Carolina Department of Health and Environmental Control (SCDHEC) issued Consent Order No. SW-05-81, which ordered all disposal activities at the Site to cease.

F. Samples collected at the Site by the State of South Carolina revealed among others, the presence of the following hazardous substances such as methyl parathion, DDT and chlordane.

G. Duck Creek and the Coosahatchie River are within two miles of the Site. One of two municipal wells that supply drinking water for Fairfax and surrounding areas is located approximately 500 feet from the site.

H. The population count within a one-half mile radius of the Site is an estimated 1800.

IV. EPA CONCLUSIONS OF LAW

A. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. Section 9601(9).

B. The Respondent is a person as defined in Section 101(21) of CERCLA, 42 U.S.C. Section 9601(21).

C. The chemicals found at the Site as described in Section III above are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14).

D. The hazardous substances described above were disposed of at the facility in such a manner that they have been released into the environment and their potential migration pathways constitute both an actual release and threatened release within the meaning of Section 101(22) of CERCLA, 42 U.S.C., Section 9601(22).

V. DETERMINATIONS

Based on the Findings of Fact and Conclusions of Law set out above, EPA has determined that:

A. The actions required by this Consent Order are necessary to protect the public health and/or welfare and/or the environment.

B. In accordance with Section 104(a)(1) of CERCLA, 42 U.S.C. Section 9604(a)(1), as amended by SARA, EPA has determined that the Respondent will properly and promptly conduct the RI/FS and is qualified to do so.

C. The actions required by this Consent Order are not inconsistent with the National Contingency Plan, 40 C.F.R. Part 300 et seq., as amended.

VI. WORK TO BE PERFORMED

All work performed pursuant to this Consent Order shall be conducted under the direction and supervision of a qualified professional engineer or a certified geologist or a technically qualified professional with expertise in hazardous waste site clean up and investigation. Prior to the initiation of the site work, the Respondent shall notify EPA in writing regarding the identity of such engineer or geologist and of any contractors and/or subcontractors to be used in carrying out the terms of this Consent Order. The Respondent's use of a technically qualified professional other than an engineer or geologist shall be conditioned upon EPA's approval of such a professional.

Based on the foregoing, it is hereby AGREED TO AND ORDERED that the following work shall be performed:

A. Within thirty (30) calendar days of the effective date of this Consent Order, the Respondent shall submit to EPA a plan for a complete Remedial Investigation and Feasibility Study ("RI/FS Work Plan"). This plan shall be developed in accordance with the EPA Remedial Investigation and Feasibility Study guidance document which has been provided to the Respondent by EPA ("Guidance For Conducting Remedial Investigations and Feasibility Studies under CERCLA, dated March 1988) and with Section 121 of the Superfund Amendments and Reauthorization Act of 1986.

B. Within forty-five (45) calendar days after receipt of the RI/FS Work Plan by EPA, EPA shall notify the Respondent in writing of EPA's approval or disapproval of the RI/FS Work Plan or any part thereof. In the event of disapproval, EPA shall specify in writing the reason for disapproval. Upon Respondent's request, within fifteen (15) days prior to receipt of EPA notification of RI/FS approval or disapproval, the Respondent and EPA shall meet to share technical comments on the proposed work plan.

C. Within thirty (30) calendar days of the receipt of EPA notification of RI/FS Work Plan disapproval, the Respondent shall submit to EPA a revised RI/FS Work Plan. Any disputes between EPA and Respondent concerning any EPA disapproval of the RI/FS Work Plan will be resolved in accordance with the Dispute Resolution Procedures set forth in Section XI below.

D. The Respondent shall implement the tasks detailed in the Remedial Investigation and Feasibility Study Work Plan ("RI/FS Work Plan"). Upon approval by EPA, the RI/FS Work Plan will be attached to and incorporated in this Consent Order (Attachment 1). This work shall be conducted in accordance with the standards, specifications, and schedule contained in the RI/FS Work Plan.

E. Within seven (7) calendar days of receipt of EPA's approval of the RI/FS Work Plan, Respondent shall commence Task 1 of the RI/FS Work Plan. A Project Operations Plan ("POP") shall be submitted within forty five (45) calendar days after receipt of EPA approval of the RI/FS Work Plan. The POP must include: (1) a detailed sampling plan, (2) a health and safety plan, (3) a quality assurance project plan, (4) a plan for satisfaction

of permitting requirements, if any, (5) a description of chain-of-custody procedures, and (6) a description of quality control and quality assurance procedures.

The POP, Work Plan and all other reports and Plans required to be submitted under this Consent Order shall be subject to review, modification, and approval by EPA. The POP must be consistent with and incorporate all of the requirements which are set forth in the EPA, Region IV Support Branch Standard Operating Procedures and Quality Assurance Manual which is dated April 1986. The POP must be consistent with any amendment to this manual.

F. The Respondent shall provide monthly written progress reports to EPA according to the schedule contained in the RI/FS Work Plan. These progress reports shall: (1) describe the actions which have been taken toward achieving compliance with this Consent Order, (2) include all results of sampling and tests and all other data received by the Respondent, and (3) include all activities completed subsequent to EPA approval of the RI/FS Work Plan during the past month, as well as such actions, data, and plans which are scheduled for the next month. These reports are to be submitted to EPA by the tenth (10th) day of each month following the date of receipt of EPA approval of the RI/FS Work Plan.

G. The Respondent shall provide preliminary and final RI/FS reports to EPA according to the schedule contained in the RI/FS Work Plan.

H. EPA shall review the preliminary and final RI/FS reports as well as all other submittals requiring EPA approval, and within forty-five (45) calendar days after its receipt of such reports, EPA shall notify the Respondent in writing of EPA's approval or disapproval of these reports or any part thereof. In the event of any disapproval, EPA shall specify in writing both the deficiencies and the reasons, including the technical basis for such disapproval.

I. Within thirty (30) calendar days after receipt of EPA notification of preliminary or final report disapproval, the Respondent shall amend and submit to EPA the revised reports pursuant to EPA review, if, in addressing the revision, additional field or laboratory work is not required. If EPA determines that additional field or laboratory work within the scope of this Consent Order is required to complete the revisions, then EPA and the Respondent shall agree on an appropriate amount of time for preparation of the revised report. In the event of disapproval of a revised report, EPA retains the right to amend such report, to perform additional studies, to perform such work as is necessary to complete the RI/FS or portions thereof pursuant to its authority under CERCLA/SARA, to seek Cost Recovery against Respondent and other potentially responsible parties and to assess stipulated penalties pursuant to Section XIV of this Consent Order. Respondent reserves the right to contest any such Cost Recovery action or attempt to assess stipulated penalties.

J. Documents, including reports, approvals, and other correspondence, to be submitted pursuant to this Consent Order, shall be sent by certified mail to the following addresses or to such other addresses as the Respondent or EPA hereafter may designate in writing:

1) Documents (5 complete copies) submitted to EPA should be sent to:

Mr. Michael F. Townsend
NC/SC Site Management Unit
Superfund Branch
Waste Management Division
U.S. Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

If a document is large enough to require binding, one copy should be left unbound, secured with rubber bands or the like.

Documents (5 Copies) to be submitted to the Respondent should be sent to:

Ed Brister
Environmental Compliance Manager
Helena Chemical Company
5100 Poplar Avenue
Suite 3200
Memphis, TN 38137

Phillip G. Coop, CHMM
Vice President
ENSAFE
5705 Stage Road
Suite 212
Memphis, TN 38134-1315

K. In addition to the EPA-approved tasks and deliverables to be completed pursuant to this Consent Order, EPA may determine that additional tasks, beyond the scope of this Consent Order, including remedial investigative work and/or engineering evaluation, may be necessary as part of the RI/FS. EPA retains its right to request that the Respondent perform these additional RI/FS tasks.

Further, EPA retains the right to request Respondent to perform additional sampling if such is deemed necessary by EPA to adequately investigate the Site. Should EPA determine that such additional tasks are necessary, EPA shall notify Respondent in writing of its decision and shall set forth the factual and technical basis thereof. Within thirty (30) calendar days after receipt of EPA's notice, Respondent shall notify EPA in writing as to whether or not Respondent will agree to conduct the additional tasks. Upon written agreement of EPA and Respondent, this Consent Order may be modified as necessary to address such further investigation and study. Should Respondent not agree to perform these additional tasks and to amend this Consent Order as may be necessary, EPA retains the right to perform any additional work as authorized by CERCLA/SARA, to perform such work as is necessary to complete the RI/FS, and to seek cost recovery from Respondent and any other potentially responsible parties, and Respondent reserves the right to contest any such cost recovery action. Failure of the Respondent to agree to perform additional work under this Section shall not be a violation of this Consent Order. Any disagreement between the Parties concerning additional work under this Section will not be subject to the Dispute Resolution process (Section XI of this Consent Order).

VII. DESIGNATED PROJECT COORDINATORS

On or before the effective date of this Consent Order, EPA and the Respondent shall each designate a Project Coordinator. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Order. To the maximum extent possible, communications between the Respondent and EPA and all documents, including reports, approvals, and their correspondence, concerning the activities performed pursuant to the terms and conditions of this Consent Order, shall be directed through the Project Coordinators.

During the course of implementation of the work, the Project Coordinators shall, whenever possible, operate by consensus. The Project Coordinators shall attempt to resolve disputes informally through good faith discussion of the issues. EPA and the Respondent each have the right to change their respective Project Coordinator. Such a change shall be accomplished by notifying the other party in writing at least five (5) calendar days prior to the change.

The EPA-designated Project Coordinator shall have the authority provided by the National Contingency Plan, 40 C.F.R. Part 300, et seq. This includes the authority to halt, conduct, or direct any tasks required by this Consent Order and/or any response actions or portions thereof when conditions present an immediate risk to public health and/or welfare and/or the environment.

Neither the absence of the EPA Project Coordinator from the Site nor the lack of availability of an EPA representative by phone shall be cause for the stoppage of work except where the approval or concurrence of such a coordinator of EPA is necessary for a particular item of work to continue or be completed or where the cessation of work is necessary to abate an immediate risk of harm to public health, welfare or the environment. Respondent shall notify the EPA Project Coordinator or other designated EPA representatives as soon as practicable by phone, that work has been discontinued. Further, within twenty-four (24) hours after work is discontinued, Respondent shall submit to EPA a written explanation of why work was discontinued. Should a disagreement arise between EPA and Respondent concerning Respondent's decision to discontinue work, the dispute shall be resolved in accordance with the provisions of the "Dispute Resolution" section (Section XI) of this Consent Order.

VIII. QUALITY ASSURANCE

The Respondent shall use quality assurance, quality control, and chain-of custody procedures in accordance with the EPA, Region IV, Environmental Services Division Standard Operating Procedures Manual (April 1, 1986) throughout all sample collection and analyses activities. This manual has been provided to the Respondent by EPA. The Respondent shall consult with EPA in planning for, and prior to, all sampling and analyses as detailed in the RI/FS Work Plan. In order to provide quality assurance, and maintain quality control regarding all samples collected pursuant to this Consent Order, the Respondent shall:

A. Ensure that EPA personnel and/or EPA-authorized representatives are allowed access to the laboratory(s) and personnel utilized by the Respondents for analyses;

B. Ensure that the laboratory(s) utilized by the Respondent for analyses perform such analyses according to EPA methods or methods deemed satisfactory to EPA and submit all protocols to be used for analyses to EPA at least twenty-four (24) calendar days prior to the commencement of analyses;

C. Ensure that laboratory(s) utilized by the Respondent for analyses participate in an EPA quality assurance/quality control program equivalent to that which is followed by EPA and which is consistent with EPA document QAMS-005/80 entitled "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans." As part of such a program, and upon request by EPA, such laboratory(s) shall perform such analyses of samples provided by EPA to demonstrate the quality of each laboratory's analytical data. EPA shall not be arbitrary and capricious in the number of samples it chooses to submit to verify the quality of each laboratory's data.

IX. SITE ACCESS

To the extent that areas covered by the RI/FS Work Plan are presently owned by parties other than those bound by this Consent Order, the Respondent has obtained or will use its best efforts to obtain Site access agreements from the present owners within forty-five (45) calendar days of the effective date of this Consent Order. Such agreements shall provide reasonable access by EPA and/or its authorized representatives. In the event that Site access agreements are not obtained within the time referenced above, the Respondent shall notify EPA regarding both the lack of, and efforts to obtain, such agreements within forty-five (45) calendar days of the effective date of this Consent Order. In such event, EPA will use all appropriate authority available to assist the Respondent in obtaining such access. Failure by Respondent to obtain Site access agreements, after use of its best efforts, does not constitute a violation of this Consent Order. Work at the Site will be delayed until Site access is obtained.

X. SAMPLING, ACCESS, AND DATA/DOCUMENT AVAILABILITY

The Respondent shall make the results of all sampling and/or tests or other data generated by the Respondent or on the Respondent's behalf, to comply with this Consent Order, available to EPA and shall submit these results in monthly progress reports as described in Section VI.F of this Consent Order. EPA will make available to the Respondent the results of sampling and/or tests or other data similarly generated by EPA.

At the request of EPA, the Respondent shall allow split or duplicate samples to be taken by EPA and/or its authorized representatives, of any samples collected by the Respondent pursuant to the implementation of this Consent Order. The Respondent shall notify EPA not less than seventy-two (72) hours in advance of any sample collection activity. This notification may be given verbally in the field by the Respondent to EPA's authorized representative.

EPA shall allow split or duplicate samples to be taken by the Respondent of any samples collected by EPA or its contractors during the performance of work associated with this Consent Order and shall notify the Respondent not less than seventy-two (72) hours in advance of any samples collection activity.

Respondent will not in any way prevent or impede EPA and/or its authorized representative from freely moving about all property at the Site at all reasonable times for the purposes of, inter alia: inspecting non-privileged records, operating logs, and contracts related to the Site; reviewing the progress of the Respondent in carrying out the terms of this Consent Order; conducting such tests as EPA or the Project Coordinator deem necessary; and verifying the data submitted to EPA by the Respondent. The Respondent shall permit such persons to inspect and copy all non-privileged records, files, photographs, sampling and monitoring data, documents, and other writings, in any way pertaining to work undertaken pursuant to this Consent Order. All parties with access to the Site pursuant to this paragraph shall comply with all approved health and safety plans.

The Respondent reserves the right to withhold from EPA inspection those records which may be subject to the attorney work-product privilege, the attorney-client privilege or any other privilege. However, no sampling data, sampling data and analytical data reports, books and logs or any other documents, reports, records and information, which the Respondent is required to generate pursuant to this Consent Order and the RI/FS Work Plan, may be withheld from EPA on the basis that they are subject to the attorney work-product privilege, the attorney-client privilege or any other privilege.

The Respondent may assert a confidentiality claim, if appropriate, covering part or all of the information provided under this Consent Order pursuant to 40 C.F.R. Section 2.203(b). Such an assertion shall be adequately substantiated when the assertion is made. Analytical data shall not be deemed as confidential by the Respondent. Information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is submitted or made available to EPA, it may be made available to the public by EPA without further notice to the Respondent.

XI. DISPUTE RESOLUTION

The Project Coordinators shall first attempt to resolve informally all matters concerning the Work Plan activities and the interpretation of this Order. If the Project Coordinators cannot resolve a difference of opinion with respect to such matters within twenty-four (24) hours or if Respondent objects to any EPA

notice of deficiency or any other decision made pursuant to this Order, Respondent shall notify EPA in writing of its objection within fourteen (14) days of receipt of the notice or decision. EPA and Respondent then have an additional fourteen (14) days from the receipt by EPA of the notification of objection to negotiate in good faith to reach agreement. If agreement cannot be reached on any issue within this fourteen (14) day period, EPA shall provide a written statement to the Respondent setting forth EPA's factual and technical basis for its decision. EPA may then proceed to complete the RI/FS or any part thereof and seek cost recovery. Payment of stipulated penalties with respect to any disputed issues shall be stayed pending resolution of the disputes. In the event Respondent does not prevail in the dispute, stipulated penalties shall be assessed and paid as provided in Section XIV herein. Further, EPA's decision concerning the need for additional tasks, sampling and/or resampling, as set forth in Section VI.K. of this Consent Order, shall not be subject to the Dispute Resolution process.

XII. RECORD PRESERVATION

Respondent shall preserve, during the pendency of this Consent Order and for a minimum of six (6) years after its termination, one copy of all records and documents in its possession or in the possession of its divisions, employees, agents, accountants, contractors, or attorneys which relate to the implementation of this Order, despite any document retention policy to the contrary. Upon notification to EPA, the Respondent may select one location for storage of records pertaining to the implementation of this Consent Order. After this six (6) year period, the Respondent shall notify EPA within thirty (30) calendar days prior to the destruction of any such records or completed copies of such records.

Additionally, if EPA requests that some or all documents be preserved for a longer period, the Respondent shall comply with such request, or make a copy of the documents available to EPA should the respondent elect not to retain the records for a longer period.

XIII. DELAY IN PERFORMANCE/FORCE MAJEURE

Respondent's activities under this Consent Order shall be performed within the time limits set forth in the RI/FS Work Plan referenced in Section VI above, unless performance is delayed by events which constitute a force majeure. For purposes of this Consent Order, a force majeure is defined as any event arising from causes beyond the reasonable control of Respondent which could not have been prevented by the exercise of due diligence. Increased cost in performing the terms of this Consent Order, changed economic circumstances and/or failure to apply for permits and approvals shall not be considered as constituting a force majeure.

The Respondent shall notify EPA's Project Coordinator orally within forty-eight (48) hours, and in writing no later than ten (10) business days from the inception and/or date of discovery of any event which Respondent contends

constitutes a force majeure as defined above. The written notice shall describe fully the nature of the delay, why the delay is beyond the control of the Respondent, the actions taken and/or that will be taken to mitigate, prevent and/or minimize further delay, the anticipated length of the delay and the timetable by which the actions to mitigate, prevent and/or minimize the delay will be taken. The Respondent shall adopt all reasonable measures to avoid or minimize any such delay.

If the date of discovery differs from the date of inception, include in the required written notice the reasons for the time variance. At the time of notification, EPA will make a determination whether the variance is warranted and make the necessary adjustments to reporting requirements if applicable.

Delay that results from circumstances beyond the control of the Respondent that cannot be overcome by due diligence on the Respondent's part shall not be deemed to be a violation of this Consent Order. To the extent a delay is caused by circumstances beyond the control of the Respondent, the schedule affected by the delay shall be extended for a period equal to the delay resulting from such circumstances unless other circumstances warrant more time in the opinion of EPA.

Failure of the Respondent to comply with the written notice requirements of this Section shall constitute a waiver of the Respondent's right to invoke the benefits of this Section with respect to that event.

If EPA does not determine that the circumstances were beyond the reasonable control of the Respondent, the dispute shall be resolved in accordance with the provisions of the "Dispute Resolution" Section (Section XI) of this Consent Order.

XIV. STIPULATED PENALTIES

Unless excused under the provisions of Section XIII, the Respondent shall pay into the Hazardous Substance Superfund administered by EPA, the sums set forth below as stipulated penalties.

Stipulated penalties shall accrue as follows:

For the 1st through the 14th day of failure to comply with the terms and conditions of the Consent Order, there will be a $1000 penalty per violation per day; for the 15th through the 44th day of failure to comply with the terms and conditions of the Consent Order, there will be a $2000 penalty per violation per day; and for the 45th day and beyond, there will be $3000 penalty per violation per day.

Checks should be addressed to:

U.S. EPA- Region IV
ATTN: Superfund Accounting
P.O. Box 100142
Atlanta, GA 30365

A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

Stipulated penalties begin to accrue on the day that a violation occurs or on the day following Respondent's failure to comply with any schedules or deadlines, or the terms conditions or requirements contained in this Consent Order and/or Work Plan, and shall continue to accrue until Respondent's violation ends or until Respondent complies with the particular schedule, deadline, term, condition or requirement. Payment of stipulated penalties shall be due and owing within sixty (60) days from the date of a written notice from EPA notifying Respondent that penalties have been assessed.

The stipulated penalties set forth in this Section do not preclude EPA from electing to pursue any other remedies or sanctions, which may be available to EPA by reason of the Respondent's failure to comply with any of the requirements of this Consent Order. Respondent reserves any rights it may have to contest any EPA election to pursue any other such remedies and sanctions. Such remedies and sanctions may include a suit for statutory penalties up to the amount authorized by law, a federally-funded response action, and a suit for reimbursement of costs incurred by the United States.

XV. INCORPORATION OF REPORTS

Any reports, plans, specifications, schedules, and attachments required by this Consent Order are, upon approval by EPA, incorporated into this Consent Order. Any non-compliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a failure to achieve the requirements of this Consent Order and will subject the Respondent to the provisions included in Section XIV above.

XVI. RESERVATION OF RIGHTS

Notwithstanding compliance with the terms of this Consent Order, including the completion of an EPA approved Remedial Investigation and Feasibility Study, the Respondent is not released from liability, if any, for any actions beyond the terms of this Consent Order taken by EPA with respect to the Site. EPA reserves the right to take any enforcement action pursuant to CERCLA/SARA and/or any available State or other legal authority, including the right to seek any remedy, sanction, injunctive relief, monetary penalties, and punitive damages for any violation of law or this Consent Order. Respondent reserves all rights it may have other than those expressly waived by this Consent Order.

The Respondent and EPA expressly reserve all rights and defenses that they may have, including EPA's right both to disapprove of work performed by the Respondent and to request that the Respondent perform tasks in addition to those detailed in the RI/FS Work Plan, as provided in this Consent Order. In the event that the Respondent declines to perform any additional and/or modified tasks, EPA will have the right to undertake any such work. In addition, EPA reserves the right to undertake removal actions and/or remedial actions at any time. In either event, EPA reserves the right to seek reimbursement from the Respondent thereafter for such costs incurred by the United States. Respondent reserves all defenses and rights it may have to contest against any cost recovery actions EPA may bring.

Respondent reserves all rights that it has or may have to assert claims against persons or entities for matters arising out of the Site or its operation and ownership, including, but not limited to, claims for breach of contract, indemnity, contribution, nuisance and claims under federal, state and local laws.

XVII. REIMBURSEMENT OF COSTS

The Respondent shall fully reimburse EPA for all oversight costs, not inconsistent with the NCP, which are incurred by the President with respect to this Consent Order. At the end of each fiscal year, EPA shall submit to the Respondents a demand for payment and an itemized account of the oversight costs which are being claimed. The payment shall be due within thirty (30) calendar days of the Respondent's receipt of such a demand and accounting and shall be made by certified or cashiers check, payable to the "Hazardous Substance Superfund".

Checks should specifically reference the identity of the Site and be addressed to:

U.S. EPA- Region IV
ATTN: Superfund Accounting
P.O. Box 100142
Atlanta, GA 30384
Attention: Collection Officer for Superfund

A copy of the transmittal letter should be sent to the Project Coordinator.

EPA reserves the right to bring an action against any other responsible party pursuant to Section 107 of CERCLA for recovery of all response and oversight costs incurred by the United States related to this Consent Order and not reimbursed by the Respondent, as well as any other past and future costs incurred by the United States from the Fund in connection with response activities conducted pursuant to CERCLA/SARA at this Site.

XVIII. OTHER CLAIMS

Nothing herein is intended to release any claims, causes of action or demands in law or equity that EPA or the Respondent may have against any person, firm, partnership, or corporation, not a signatory to this Consent Order, for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site. The Consent Order does not constitute any decision on preauthorization of funds under Section 111(a)(2) of CERCLA.

Additionally, the Respondent agrees not to assert any claims or causes of action against the United States or the Hazardous Substances Superfund for any costs arising out of the response activities taken at this Site pursuant to this Order or to seek any other costs, damages or attorneys fees from the United States, its agencies, employees or contractors, which arise out of response actions taken at the Site.

XIX. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to this Consent Order shall be undertaken in accordance with the requirements of all approved applicable local, state, and federal laws and regulations unless an exemption from such requirements is specifically provided herein.

XX. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent agrees to indemnify and save and hold the United States Government, its agencies, departments, agents, and employees, harmless from any and all claims or causes of action arising from or on account of acts or omissions of the Respondent, its officers, employees, receivers, trustees, agents or assigns, in carrying out the activities pursuant to this Consent Order. EPA is not a party in any contract involving the Respondent at the Site.

XXI. PUBLIC COMMENT

Upon submittal to EPA of an approved Feasibility Study Final Report, EPA shall make both the Remedial Investigation Final Report and the Feasibility Study Final Report available to the public for review and comment for, at a minimum, a twenty-one (21) day period, pursuant to EPA's Community Relations Policy. EPA will attempt to provide Respondent notice of the information to be disseminated to the public and shall consider Respondent's comments on such information. Furthermore, EPA shall provide Respondent with notice of public meetings to be held by or sponsored by EPA to explain activities at the Site, so that Respondent might have the opportunity to participate in such a

meeting. Following the public review and comment period, EPA shall notify the Respondent which remedial action alternative is approved for the Site.

XXII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

In consideration of the communications between the Respondent and EPA prior to the issuance of this Consent Order concerning its terms, the Respondent agrees that there is no need for a settlement conference prior to the effective date of this Consent Order. Therefore, the effective date of this Consent Order shall be the date on which it is signed by the Regional Administrator of EPA, Region IV.

This Consent Order may be modified by mutual agreement of EPA and the Respondent. Such modifications shall be in writing and shall have as the effective date, that date on which such modifications are signed by EPA.

No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by the Respondent will be construed as relieving the Respondent of its obligation to obtain such formal approval as may be required by this Consent Order.

XXIII. PARTIES BOUND

This Consent Order shall apply to and be binding upon the Respondent and EPA, their agents, successors, and assigns and upon all persons, contractors, and consultants acting under or for either the Respondent or EPA or both. No change in ownership or corporate or partnership status relating to the Site will in any way alter the status of the Respondent or in any way alter the Respondent's responsibility under this Consent Order. The Respondent will remain the Respondent under this Consent Order and will be responsible for carrying out all activities required of the Respondent under this Consent Order.

The Respondent shall provide a copy of this Consent Order to all contractors, sub-contractors, laboratories, and consultants within fourteen (14) calendar days of the effective date of this Consent Order or date of such retention.

XXIV. NOTICE TO THE STATE

EPA has notified the State of South Carolina pursuant to the requirements of Section 106(a) of CERCLA.

XXV. TERMINATION AND SATISFACTION

Within thirty days after EPA finalizes its Record of Decision (ROD), the Agency will provide the Respondent with a certification that they have satisfied their obligations under the Work Plan and this Consent Order. This certification shall be provided by EPA only upon the Agency's determination that the Respondent has in fact satisfied its obligations under the Work Plan and this Consent Order. Should the Agency require a greater amount of time than thirty (30) days to reach a determination, such additional time as is necessary to render a decision shall be provided for and the EPA will then issue a determination and, if appropriate, certification as soon as is practicable. No determination made by EPA under this Section shall be arbitrary or capricious. Upon the Respondent's receipt of such a written certification from EPA, the provisions of this Consent Order shall be deemed satisfied.

IT IS SO AGREED AND ORDERED:

BY: Lee A. Direlus Jr. for — APR 12 1989

Greer C. Tidwell — Date
Regional Administrator
U. S. Environmental Protection Agency, Region IV

EFFECTIVE DATE: APRIL 12, 1989

Helena Chemical Company, the Respondent in this proceeding, has had an opportunity to confer with EPA and hereby consents to the issuance and terms of the Administrative Order on Consent for the performance of the Remedial Investigation and Feasibility Study at the Helena Chemical Site, Fairfax, South Carolina, U.S. EPA Docket No.: 89-12-C

M. G. Brinton — March 29, 1989

TITLE Vice President — DATE

HELENA CHEMICAL COMPANY

CORPORATE OFFICE
Suite 3200 – Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137
Telephone 901 761 0050
Telex 8105911595

October 7, 1991

VIA CERTIFIED MAIL AND TELECOPY

10121432

Bart Reedy
On-Scene Coordinator
U.S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, GA 30365

RE: Fairfax, South Carolina Facility

Dear Mr. Reedy:

Enclosed is a copy of the revised RI/FS schedule which we discussed by telephone on Thursday, October 3rd. As you know, the schedule was adjusted by adding 30 days to the revised RI reporting date of 11-10-91 as shown on your Revised RI/FS Schedule dated September 12, 1991. All submission dates past the 11-10-91 date have been moved back 30 days as well with slight adjustments made to avoid dates falling on weekends.

This is essentially the schedule as proposed by EPA during our meeting in Atlanta on October 1, 1991. If you agree with this schedule, please sign and return a copy to me.

Sincerely,

Edward B Brister

Edward B. Brister, Director
Regulatory Compliance & Engineering

EBB/cm

Enclosure

HELENA CHEMICAL COMPANY
FAIRFAX, S.C.
ADMINISTRATIVE ORDER NO. 89-19-3 AMENDMENT
FIELD INVESTIGATION SCHEDULE

ORIGINAL DUE DATE	REVISION I DUE DATE	REVISION II DUE DATE	REVISION III DUE DATE	TASK DESCRIPTION
05-16-90	05-16-90	05-16-90	05-16-90	Written approval of Project Operations Plan (POP) from USEPA received by Helena Chemical Company and EnSafe.
05-17-90	05-17-90	05-17-90	05-17-90	Initiate Task 7, Phase I; Field Equipment Mobilization and Task 9,Phase I, Ecology Study.
06-15-90	06-15-90	06-15-90	06-15-90	Phase II-A field activites will begin.
09-01-90	09-29-90	09-29-90	09-29-90	Receipt of analytical data from Phase II-A field activities.
09-29-90	10-20-90	10-20-90	10-20-90	Submit to USEPA Phase II-A Site Constituent Validation Report and Ecological Report (from Task 9, Phase I).
11-13-90	12-04-90	01-31-91	01-31-91	Receipt of USEPA comments on the Phase II-A Site Constituent Validation Report (45 days from submittal date).
12-13-90	01-03-91	02-01-91	02-01-91	Submission of revised Phase II-A Site Constituent Validation Report (45 days from receipt of USEPA comments)
01-14-91	02-04-91	03-05-91	03-05-91	Initiate Phase II-B field investigation activities.
03-04-91	03-25-91	04-23-91	04-23-91	Receive analytical results from Phase II-B field activities.

ORIGINAL DUE DATE	REVISION I DUE DATE	REVISION II DUE DATE	REVISION III DUE DATE	TASK DESCRIPTION
04-01-91	04-22-91	05-21-91	05-21-91	Submit Draft Remedial Investigation (RI) Report.
05-16-91	06-06-91	07-05-91	07-05-91	Receive USEPA comments on draft RI Report
			09-06-91	Response to comments on draft RI based on 08-21-91 site meeting
			09-13-91	Submit Phase III workplan/letter
			09-23-91	Initiate Phase III field activities
			11-22-91	Receive Phase III analytical results
			12-10-91	Submit revised RI report
07-15-91	08-05-91	09-03-91	12-10-91	Submit draft Feasibility Study (FS) Report.
			01-24-92	Receive USEPA comments on revised RI report
08-29-91	09-19-91	10-18-91	01-24-92	Receive USEPA comments on draft FS Report
06-15-91	07-06-91	08-05-91	03-02-92	Submit final RI Report
09-28-91	10-19-91	11-17-91	03-02-92	Submit final FS Report

AGREED TO:

HELENA CHEMICAL COMPANY

10/7/91
Date

Edward B. Brister
Edward B. Brister
Manager Regulatory Compliance
& Engineering

U.S. EPA

10-10-91
Date

Bart Reedy
Bart Reedy
Remedial Project Manager

HELENA.KKB